



# DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNary Reservoir and Lower Snake River Reservoirs

APPENDIX B
Cost Estimates

DRAFT October 2001 FINAL July 2002

# FINAL DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT McNary Reservoir and Lower Snake River Reservoirs

#### **JULY 2002**

# ERRATA SHEET FOR APPENDIX B - COST ESTIMATES

This appendix has not been substantially changed from the draft and will not be reprinted. Please make the following changes to the draft appendix and consider the draft appendix with corrections as the final appendix.

#### Front cover:

Apply the attached label (FINAL, July 2002) on the front cover to the right of the draft date.

#### Footnotes throughout the appendix:

Change all footnote references from "Draft DMMP/EIS, October 2001" to "Final DMMP/EIS, July 2002."

#### Page B-II

#### Change the first bullet at the top of the page to read:

Mobilization from as far away as the mouth of the Columbia River was included to allow wider competition in contracting.

#### Page B-V

#### Change the third bullet from the bottom of the page to read:

Mobilization from as far away as the mouth of the Columbia River was included to allow wider competition in contracting.

#### Page B-VI

#### Add following the last bullet at the top of the page:

Disposal at the Joso site will actually require dredging of the access channel into the site at a cost during the first year of \$95,332 including indirect costs. However, since this cost is less than 1 percent of the first-year dredging and site construction cost (\$9,738,000), the Upland 3.a.b Cost Estimate was not revised. Details of the dredging cost breakdown can be seen in the Contingency Upland Disposal Cost Estimate on pages B-251 and B-252.

## Section 3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m<sup>3</sup>) Dredging Program]

Page B-VII

Change the title to read:

Template Dredging: Year 1 to end of project [300,000 cy (229 367 m<sup>3</sup>)] and Upland Disposal Site Construction: Years 1, 21, 27, and 28

## Section 3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m<sup>3</sup>) Dredging Program]

Page B-VII

### Change the 4th sentence from the end to read:

Construction of the RCC cap at the Chief Timothy transfer site and initial disposal in the Page Creek disposal site will occur in year 28.

\* \* \* END OF CHANGES \* \* \*

## DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

#### McNARY RESERVOIR AND LOWER SNAKE RIVER RESERVOIRS

#### APPENDIX B

#### **COST ESTIMATES**

U.S. Army Corps of Engineers Walla Walla District 201 N. 3rd Avenue Walla Walla, WA 99362

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#### 1.0 COST ESTIMATE SUMMARY - GENERAL

The following is a summary of the assumptions and parameters used to develop estimated costs for disposal of dredged material. Detailed estimates follow this summary in the same order as they are presented in the summary. The costs include overhead and profit, but escalation and contingencies have not been included in the calculations.

In the following discussions, the two general dredging operations are described as template dredging and template maintenance dredging. The term "template dredging" is used to describe the process of initial cleanout of the defined dredging template. "Template maintenance dredging" is used to describe the dredging required to keep the defined template free of sediment for the remainder of the study period. Larger annual quantities of dredged material are projected for the initial effort to create the dredging template. Smaller annual quantities are projected for the period focused on maintaining the established template.

#### 2.0 IN-WATER DISPOSAL ESTIMATES

These planning level estimates for disposal of dredged materials using in-water disposal were produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP). The Government Estimate is based on the following assumptions:

- Work will be conducted 24 hours per day in three 8-hour shifts per day, 7 days a week, considering four holidays. Overtime hours are anticipated.
- Dredging operations will begin on December 15 and shall not continue after February 28 in any given year due to the fish window requirements.
- The prime contractor will perform all work.
- All in-water disposal sites are accessible without further dredging requirements.
- Dredging will be accomplished using 15-cubic yard (cy) [11.5-cubic meter (m³)] clamshell dredges in the Snake/Clearwater Rivers confluence area in the Lower Granite reservoir and 10-cy (7.6-m³) clamshell dredges in the other reservoirs. The use of clamshells and scows has been considered due to the anticipated existence of silt type materials within the confluence areas.
- Dredged material will be transported to in-water disposal sites with scows. No overflow will be allowed.
- This work will take place during winter months, but no adverse weather conditions other than normal winter work weather have been assumed.
- The anticipated types of soil to be encountered are sand, silts, gravels, and cobbles.
- Considerations for delays due to traffic and coordination efforts have been accounted for within the effective working time.
- All necessary labor will be available within the project location.

- Equipment will be mobilized from as far away as the mouth of the Columbia River to allow contractors from Portland and Seattle to compete.
- Turbidity monitoring will be required during the dredging operation.
- Sieve analysis testing for coarse-grained and fine-grained materials will be required for determining which disposal area to use.
- All equipment is considered owned no rental equipment is considered. All equipment other than dredging plant rates were computed based on Engineering Pamphlet (EP) 1110-1-8. All equipment other than dredging plant mobilization and demobilization costs are computed as 5 percent of direct costs.

#### 2.1 Confluence Dredging - Snake and Clearwater Rivers

There are four different dredging programs proposed for the Snake/Clearwater Rivers confluence area. The Snake River dredging areas associated with the confluence dredging programs are assumed to extend from the vicinity of Silcott Island near Snake River Mile (RM) 131 to the U.S. Highway 12 Bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake RM 139.5. The Clearwater River dredging areas are assumed to extend from the Snake/Clearwater Rivers confluence upstream to the Port of Lewiston (from Clearwater RM 0.00 to Clearwater RM 1.66). All material is assumed to be disposed of in-water at sites between Centennial Island located near Snake RM 120.5 and the upstream face of Lower Granite Dam (RM 108). The disposal sites are assumed adequate to contain all materials dredged.

The four dredging programs proposed for the Snake/Clearwater Rivers confluence area vary in the quantity of material removed annually. Two of the programs include an initial multi-year template dredging operation followed by a smaller-volume template maintenance dredging operation for the rest of the study period. The volumes and timing of the dredging associated with each of the programs are explained in the following sections.

## 2.1.1 Confluence Dredging - Snake and Clearwater Rivers [2 million cy (1 529 110 m³) Dredging Program]

The 2 million cy (1 529 110 m³) dredging program will consist of a template dredging operation and a template maintenance dredging operation.

### 2.1.1.1 Template Dredging: Years 1 through 20 [2 million cy (1 529 110 m<sup>3</sup>) annually]

Dredging will be done to excavate the defined dredging template during the first 20 years of the project, removing 2 million cy (1 529 110 m³) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$4.5 million annually.

## 2.1.1.2 Template Maintenance Dredging: Year 21 to end of project [725,000 cy (554 302 m³) annually]

Template maintenance dredging will continue from year 21 to the end of the project, removing approximately 725,000 cy (554 302 m³) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$2.4 million annually.

## 2.1.2 Confluence Dredging - Snake and Clearwater Rivers [1 million cy (764 555 m³) Dredging Program]

The 1 million cy (764 555 m<sup>3</sup>) dredging program will also consist of a template dredging operation and a template maintenance dredging operation.

### 2.1.2.1 Template Dredging: Years 1 through 10 [1 million cy (764 555 m<sup>3</sup>) annually]

Dredging will be done to excavate the defined dredging template during the first 10 years of the project, removing 1 million cy (764 555 m³) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$2.4 million annually.

## 2.1.2.2 Template Maintenance Dredging: Year 11 to end of project [325,000 cy (248 480 m³) annually]

Template maintenance dredging will continue from year 11 to the end of the project, removing approximately  $325,000 \text{ cy} (248 \ 480 \text{ m}^3)$  of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$1.3 million annually.

## 2.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m³) Dredging Program]

The 300,000 cy (229 367 m³) dredging program includes only a template dredging component. Template dredging will continue throughout the project, removing approximately 300,000 cy (229 367 m³) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$1.2 million annually.

## 2.1.4 Confluence Dredging - Snake and Clearwater Rivers Maintenance Dredging Program

The navigation and facility maintenance dredging program will maintain the design templates of features within the confluence area such as the Federal navigation channel, recreational facilities, and irrigation intakes. Dredging will not extend outside the limits of the original design template of each feature.

Maintenance dredging will continue throughout the project, starting in year 5 and then again in year 10 when 41,500 cy (31 729 m³) of material will be removed from within the authorized navigation channel. At 10-year intervals thereafter, an additional 41,500 cy (31 729 m³) of material will be removed. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately \$389,000 each year dredging takes place.

### 2.2 Dredging McNary Reservoir [32,000 cy (24 466 m<sup>3</sup>)]

The Columbia and Snake Rivers' McNary reservoir dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake RM 3 to Snake RM 9, located upstream of the confluence of the Columbia and Snake Rivers. All material is assumed to be disposed of between Columbia RM's 314.5 and 316.5.

### Maintenance Dredging: 2-Year Intervals [32,000 cy (24 466 m³)]

Dredging operations in the McNary reservoir will take place on a semi-annual basis, removing approximately 32,000 cy (24 466 m³) with each effort. This portion of the work will cost approximately \$297,000 semi-annually.

### 2.3 Dredging Ice Harbor Reservoir [2,000 cy (1 529 m³)]

The Snake River's Ice Harbor reservoir dredging area is located downstream of Lower Monumental Dam. All material is assumed to be disposed of between Snake RM's 10 and 23.

### Maintenance Dredging: 2-Year Intervals [2,000 cy (1 529 m³)]

Dredging operations in the Ice Harbor reservoir will take place on a semi-annual basis, removing approximately  $2,000 \text{ cy } (1529 \text{ m}^3)$  with each effort. This portion of the work will cost approximately \$192,000 semi-annually.

### 2.4 Dredging Lower Monumental Reservoir [2,000 cy (1 529 m³)]

The Snake River's Lower Monumental reservoir dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake Rivers. All material is assumed to be disposed of between Snake RM's 42 and 47.

### Maintenance Dredging: 2-Year Intervals [2,000 cy (1 529 m³)]

Dredging operations in the Lower Monumental reservoir will take place on a semi-annual basis, removing approximately 2,000 cy (1 529 m<sup>3</sup>) with each effort. This portion of the work will cost approximately \$230,000 semi-annually.

### 2.5 Dredging Little Goose Reservoir [4,000 cy (3 058 m³)]

The Snake River's Little Goose reservoir dredging area is located downstream of Lower Granite Dam and at Schultz Bar, located near Snake RM 100. All material is assumed to be disposed of between Snake RM's 71 and 83.

### Maintenance Dredging: 2-Year Intervals [4,000 cy (3 058 m³)]

Dredging operations in the Little Goose reservoir will take place on a semi-annual basis, removing approximately 4,000 cy (3 058 m<sup>3</sup>) with each effort. This portion of the work will cost approximately \$248,000 semi-annually.

#### 3.0 UPLAND DISPOSAL ESTIMATES

These planning level estimates were produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the CEDEP. The Government Estimate is based on the following assumptions:

- Work will be conducted 24 hours per day in three 8-hour shifts per day, 7 days a week, considering four holidays. Overtime hours are anticipated.
- Dredging operations will begin on December 15 and shall not continue after February 28 in any given year to comply with agency requirements that prohibit in-water work during periods of fish migration.
- The prime contractor will perform all work.
- All disposal transfer sites are accessible without further dredging requirements.
- Dredging will be accomplished using 10-cy (7.6-m³) clamshell dredges and material will be transported on scows for disposal. The dredging material will be off-loaded from the barges on to the disposal area. The use of clamshells and scows has been considered due to the anticipated existence of silt type materials within the confluence areas.
- The anticipated types of soil to be encountered are sand, silts, gravels, and cobbles.
- Considerations for delays due to traffic and coordination efforts have been accounted for within the effective working time.
- No adverse weather conditions other than normal winter work weather have been assumed.
- All necessary labor will be available within the project location.
- Equipment will be mobilized from the mouth of the Columbia River to allow contractors from Portland and Seattle to compete.
- Turbidity monitoring will be required during the dredging operation.
- Sieve analysis testing for coarse-grained and fine-grained materials will be required for determining which disposal area to use.

• All equipment is considered owned - no rental equipment is considered. All equipment other than dredging plant rates were computed based on EP 1110-1-8. All equipment other than dredging plant mobilization and demobilization costs are computed as 5 percent of direct costs.

#### 3.1 Confluence Dredging - Snake and Clearwater Rivers

For the upland disposal operation, the dredging programs are similar to those described for the in-water disposal operation. The dredging areas and volumes of dredged material removed are the same (see section 2.1), but the material is assumed to be disposed of in designated upland sites. The disposal sites are assumed to contain all materials dredged.

The following sections describe the dredging and disposal activities for the four dredging programs with emphasis on the development of the upland disposal sites.

## 3.1.1 Confluence Dredging - Snake and Clearwater Rivers [2 million cy (1 529 110 m³) Dredging Program]

The 2 million cy (1 529 110 m³) dredging program will consist of a template dredging operation and a template maintenance dredging operation.

## 3.1.1.1 Template Dredging: Years 1 through 20 [2 million cy $(1\ 529\ 110\ m^3)]$ and Upland Disposal Site Construction: Years 1 and 2

The initial construction of the Chief Timothy transfer site and the Page Creek upland disposal site will occur in year 1. Upland disposal of dredged materials during the first year will be restricted to temporary placement of the materials at the Chief Timothy transfer site. Year 2 will include construction of the Chief Timothy transfer site roller-compacted concrete (RCC) cap and upland disposal of dredged materials at Page Creek. Dredging will remove approximately 2 million cy (1 529 110 m³) of material annually for the first 20 years to establish the defined dredging template. The estimated cost of this work is \$33.4 million over the first 2 years and \$20.2 million annually for years 3 through 20.

## 3.1.1.2 Template Maintenance Dredging: Year 21 to end of project [725,000 cy (554 302 m<sup>3</sup>)]

Starting in year 21, the dredging operations would be scaled back, reducing the quantity of dredged material to 725,000 cy (554 302 m<sup>3</sup>) annually. This amount of material would be disposed of at the Page Creek site through the remainder of the project. The estimated annual cost of this work is \$8.3 million.

## 3.1.2 Confluence Dredging - Snake and Clearwater Rivers [1 million cy (764 555 m³) Dredging Program]

The 1 million cy (764 555 m<sup>3</sup>) dredging program will also consist of a template dredging operation and a template maintenance dredging operation.

## 3.1.2.1 Template Dredging: Years 1 through 10 [1 million cy (764 555 m³)] and Upland Disposal Site Construction: Years 1 through 3

The initial construction of the Chief Timothy transfer site and the Page Creek upland disposal site will occur in year 1. Upland disposal of dredged materials during the first year will be restricted to temporary placement of the materials at the Chief Timothy transfer site. Year 3 will include construction of the Chief Timothy transfer site RCC cap and upland disposal of dredged materials at Page Creek. Dredging will remove approximately 1 million cy (764 555 m³) of material annually for the first 10 years to establish the defined dredging template. The estimated cost of this work is \$23.9 million over the first 3 years and \$10.3 million annually for years 4 through 10.

## 3.1.2.2 Template Maintenance Dredging: Year 11 to end of project [325,000 cy $(248480 \text{ m}^3)$ ]

Starting in year 11, the dredging operations would be scaled back, reducing the quantity of dredged material to 325,000 cy (248 480 m<sup>3</sup>) annually. This amount of material would be disposed of at the Page Creek site through the remainder of the project. The estimated annual cost of this work is \$5.7 million.

## 3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m³) Dredging Program]

Template Dredging: Year 1 to end of project [300,000 cy (229 367 m³) and Upland Disposal Site Construction: Years 1, 21, and 27

The 300,000 cy (229 367 m³) dredging program includes only a template dredging component. Template dredging will continue throughout the project, removing approximately 300,000 cy (229 367 m³) of material annually. The upland disposal site at Joso will be constructed during the first year and dredged material will be deposited at the Joso site for the first 20 years of the project. In year 21, the Chief Timothy transfer site will be constructed. Starting in year 21 and continuing until year 28, all of the dredged material [300,000 cy (229 367 m³) annually] will be used to develop the Chief Timothy transfer site. In year 27, construction of the Page Creek upland disposal site will begin. Construction of the RCC cap at the Chief Timothy transfer site and initial construction of the Page Creek disposal site will occur in year 28. The total cost of the work through year 28 is estimated at \$122.6 million. From year 29 to the end of the project, the materials will be disposed of at the Page Creek site. The annual cost of this work is estimated at \$3.6 million.

### **3.1.4** Confluence Dredging - Snake and Clearwater Rivers (Maintenance Dredging Program)

The navigation and facility maintenance dredging program will maintain the design templates of features within the confluence area such as the Federal navigation channel, recreational facilities,

and irrigation intakes. Dredging will not extend outside the limits of the original design template of each feature.

Construction of the Joso disposal site and disposal of 41,500 cy (31 729 m³) of dredged material at the Joso site will occur in year 5. Maintenance dredging operations will dispose of an additional 41,500 cy (31 729 m³) of material at the Joso site in year 10 and at 10-year intervals after that until the end of the project. Initial construction of the Joso disposal site and placement of 41,500 cy (31 729 m³) of dredged material at the Joso site during the first year will cost \$3.2 million. Disposal of an additional 41,500 cy (31 729 m³) of dredged material during year 10 of the project will cost an additional \$1 million. Disposal of 41,500 cy (31 729 m³) at 10-year intervals during the remainder of the project will cost \$1 million per operation.

### 3.2 Dredging McNary Reservoir [32,000 cy (24 466 m<sup>3</sup>)]

The Columbia and Snake Rivers' McNary reservoir dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake RM 3 to Snake RM 9, located upstream of the confluence of the Columbia and Snake Rivers. All material is assumed to be disposed of in designated upland sites.

## Maintenance Dredging: Year 1 to end of project [32,000 cy (24 466 m³)] and Upland Disposal Site Construction: Year 1

The first year of operation will include construction of the Joso site and upland disposal of 32,000 cy (24 466 m³) of dredged material. Semi-annual maintenance dredging will remove and dispose of 32,000 cy (24 466 m³) of dredged material at the Joso site. Initial construction of the Joso disposal site and disposal of 32,000 cy (24 466 m³) of material during the first year will cost \$2.9 million. The remainder of the work will cost approximately \$683,000 semi-annually.

### 3.3 Dredging Ice Harbor Reservoir [2,000 cy (1 529 m³)]

The Snake River's Ice Harbor reservoir dredging area is located downstream of Lower Monumental Dam. All material is assumed to be disposed of in designated upland sites.

### Maintenance Dredging: Year 1 to end of project [2,000 cy (1 529 m³)]

Maintenance dredging will consist of removing 2,000 cy (1 529 m³) annually from the Ice Harbor reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately \$204,000 semi-annually.

### 3.4 Dredging Lower Monumental Reservoir [2,000 cy (1 529 m³)]

The Snake River's Lower Monumental reservoir dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake Rivers. All material is assumed to be disposed of in designated upland sites.

### Maintenance Dredging: Year 1 to end of project [2,000 cy (1 529 m<sup>3</sup>)]

Maintenance dredging will consist of removing 2,000 cy (1 529 m³) semi-annually from the Lower Monumental reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately \$208,000 semi-annually.

### 3.5 Dredging Little Goose Reservoir [4,000 cy (3 058 m³)]

The Snake River's Little Goose reservoir dredging area is located downstream of Lower Granite Dam and at Schultz Bar, near Snake RM 100. All material is assumed to be disposed of in designated upland sites.

### Maintenance Dredging: Year 1 to end of project [4,000 cy (3 058 m³)]

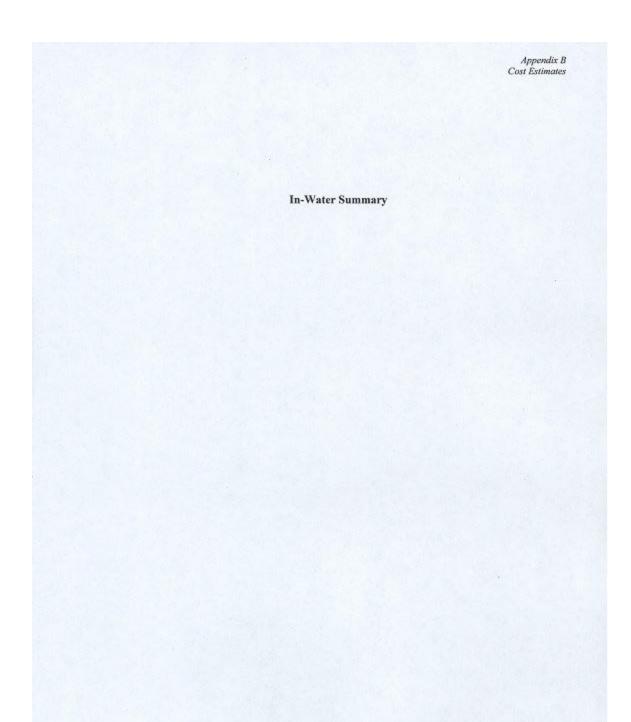
Maintenance dredging will consist of removing 4,000 cy (3 058 m³) semi-annually from the Little Goose reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately \$244,000 semi-annually.

### 3.6 Dredging Contaminated Material [7,000 cy (5 352 m³)]

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake RM 131 to the State Highway 12 Bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake RM 139.5. The Clearwater River dredging areas are assumed to extend from the Snake/Clearwater Rivers confluence upstream to the Port of Lewiston (from Clearwater RM 0.00 to Clearwater RM 1.66). All material is assumed to be disposed of utilizing a disposal area at Joso near Snake RM 56. The disposal site is assumed adequate to contain all materials dredged. It is anticipated that, on an annual basis, approximately 7,000 cy (5 352 m³) of material will be dredged that will be determined to contain contaminated materials that will require upland disposal at a site designed to contain such materials. A site will be developed at Joso that is appropriate for containment of contaminated materials.

## Maintenance Dredging: Year 1 to end of project [7,000 cy (5 352 m³)] and Joso Contingency Upland Disposal Site Construction: Year 1

Initial construction of the Joso disposal site and disposal of approximately  $7,000 \text{ cy } (5\ 352\ \text{m}^3)$  of contaminated dredged material will take place in the first year. The estimated cost of initial construction, dredging, and disposal of materials in the first year is \$11,612,000. It was assumed that disposal of approximately  $7,000\ \text{cy } (5\ 352\ \text{m}^3)$  of contaminated dredged material will take place each confluence dredging operation. The estimated cost of this work is \$230,000 per year that dredging takes place in the confluence area.



### Dredge Material Management Study Dredging of Snake and Clearwater Rivers

Revision #1 8/2/99

	In-water Disposal				
	Description	Years	Quantity	U/M	Total \$ Costs Each Year of Dredging
Item 1 - 0	Confluence Dredging Snake & Clearwater Rivers				
	Template dredge operation Template maintenance dredge operation	1-20 21-end	2,000,000 725,000		\$4,451,000 \$2,367,000
Item 2 - 0	Confluence Dredging Snake & Clearwater Rivers				
	Template dredge operation Template maintenance dredge operation	1-10 11-end	1,000,000 325,000	0.000	\$2,416,000 \$1,280,000
Item 3 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 3.a	Template dredge operation	1-end	300,000	су	\$1,201,000
Item 4 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 4.a	Template maintenance dredge operation	5, 10, 10- yr intervals	41,500	су	\$389,000
Item 5 - I	Oredging McNary Pool				
Item 5.a	Template maintenance dredge operation	1-end at 2- yr intervals	32,000	су	\$297,000
Item 6 - I	Dredging Ice Harbor Pool				
Item 6.a	Template maintenance dredge operation	1-end at 2- yr intervals	2,000	су	\$192,000
Item 7 - I	Dredging Lower Monumental Pool				
Item 7.a	Template maintenance dredge operation	1-end at 2- yr intervals	2,000	су	\$230,000
Item 8 - I	Dredging Little Goose Pool				
Item 8.a	Template maintenance dredge operation	1-end at 2- yr intervals	4,000	су	\$248,000
Note:	Total Costs include Overhead and Profit. Escalation and contingencies are not included.				
	Points of Contact: Lead Estimator - Bob Hynek (509)527-7513 Estimator - Julie Davin (509)527-7514				

In-Water 1.a

Mon 14 Aug 2000 Bif, Date 05/01/99

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DROWZH: Dredging 2 Milley Confl. Inwater - DRMS Dredging
PLANNING ESTIMATE

TIME 12:04:51 TITLE PAGE 1

Dredging 2 Millcy Confl. Inwater DMMS Dredging of Snake & Clearwater Rivers with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NAM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

TIME 12:04:51

TITLE PAGE 2

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Nile 131 upatream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 9.00 to Clearwater River Mile 1.65. All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granice Dam River Mile 188. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows: Dredging operations will begin on IS December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

No Sub Contracting Plan: No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access: It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Common dredging methods using 15cy clarabell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamahelis and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 46) River Miles to allow contractors from Portland & Swettle to compete.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMSW2N: Dredging 2 Millry Confl. Inwater - DMSM Dredging PLANNING ESTIMATE

TIME 12:04:51

TITLE PAGE )

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed

Effective dates for: Labor: General Decision Number WA990001, Modification #1 dated 1/1/99, Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMSW2H: Dredging 2 Millcy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE Project Distributed Costs

TIME 12:04:51 DETAIL PAGE 1

0.01. Prime Contractor (AA) QUANTY UOM MHRS LAB EQUIP MAT OTHER TOTAL COST UNIT COST 

0.01. Prime Contractor (AA)

Mon 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEDMIN: Dredging 2 Millcy Confl. Inwater - DMNS Dredging PLANNING ESTIMATE Project Distributed Costs

TIME 12:04:51

DETAIL PAGE 2

0.01. Prime Contractor (AAI QUANTY UON MHRS LAB EQUIP MAT OTHER TOTAL COST UNIT COST

0.01. 0. Overhead Items - AA 0.01. 0.11. Job Office Overhead

0.01. 0.11. A. Supervision and Management

includes all top field management personnel, superintendents and non-working foremen, and their subsistence, travel, vehicles, supplies and

miscellaneous.

0.00 6073.59 6073.59 0.00 L FOR < > General Superintendent 12,147 6073.59 2.00 MO 0 0 12,147 0 0 12,147 12147.18 TOTAL Supervision and Management 1.00 MO 0 12,147 0 0 0

Mon 14 Aug 2000 E:f. Date 05/01/99 DETAILED ESTIMATE

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMEWZM: Dredging 2 Millcy Confl. Inwater - DMMS Dredging PLANMING ESTIMATE Project Distributed Costs

TIME 12:04:51 DETAIL PAGE 3

.01. Prime Contractor (AA)				QUANTY UOM	MHRS	LAB	EGGIB	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	purch trave	ncludes axing i 1, offi e are i	ation Job Office the field office and all field administrat meentory, security, and personnel. Also th ces, vehicles, supplies and miscellaneous i ncluded here. See item (C) for warehouse an	heir subsiste items to run	ence and						
	FOP	*	> Payroll Timekeepers	2.00 MD	0.00	1776.66 3,553	0.00	0.00	0.00	1776.66 3.553	1776.66
	USR	<	> Office - Supplies Assume 5% of Office Labor costs.	2.00 MO	0.00	0.00	0,00	539.37 1,079	0.00	539.37 1,079	539.37
	USR	<	> Telephone Usage Pees	2.00 MO	0.00	0.00	0.00	0.00	200.00 400	200.00 400	200.00
			TOTAL Administration Job Office	1.00 MD	0	3,553	0	1.079			

Mon 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMBM2H: Dredging 2 Hillcy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE Project Distributed Costs

TIME 12:04:51

DETAIL PAGE 4

0.01. Prime Contractor (AA)				QUANTY UOM	MHRS	LAB	ROUIP	HAT	OTHER	TOTAL COST 1	UNIT COST
0.01, 0.11.	repor	ocludes ts. QC i des thei	ntrol and Testing personnel, vehicles, equipment, and suppl nspections, and all other contract qualit r subsistence and travel, vehicles, suppl	y requiremen	ts. Also						
	USR	4	> Prepare QC Plan	2.00 EA	0.00	0.00	0.00	0.00	1000.00	1000.00 2.000	1000.00
	H CIV	<01440	1161 > Mobile Laboratory 22'Long Rented ( for field testing ) Testing Equipment not included.	2.00 90	0.00	0.00	0.00	161.91 324	0.00	161.91 324	161.91
	r civ	<01525	1113 > 4x4 1/47 Pickup (Monthly Cost) Assume 2/3-time Standby	2.00 HO	0,00	0.00	671.99 1,344	0.00	0.00	671.99 1,344	671.99
			TOTAL Quality Control and Testing	1.00 80	0	0	1,344	324	2,000	3,668	3667.81

Mcn 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT ENGMAM: Dredging 2 Hilley Confl. Inwater - DENT Dredging PLANNING ESTIMATE Project Distributed Costs

TIME 12:04:51

DETAIL PAGE 5

C.01. Prime Contractor (AA)			QUANTY UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST L	NIT COST
0.01. 0.11.	I	nitation Fac & Temp Bldgs ncludes sanitation facilities, misc. buildin not otherwise classified. But it does not								
	N CIA	<01510 6211 > Construction Portable Toilet Weekly Service	2.00 MO	0.00	0.00	0.00	80.86	0.00	80.86 162	80.86
		TOTAL Sanitation Fac & Temp Bldgs								

Mom 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMW2M: Dredging 2 Hilley Confl. Inwater - DMMS Dredging Project Distributed Costs

TIME 12:04:51

DETAIL PAGE 6

.01. Prime Contractor (AA)				QUANTY UON	MHRS	LAB	EQUIP	NAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	test	Includes ing and r s of work s.	nuipment Expenses equipment not required by specific work is ental of equipment when not charged to a . Inspection fees and permits are included	specific bid	d item or						
	HIL	*	> CR.HE,CWLR,LIFTING, 85T/160 BOOM	40.00 HR	0.00	0,00	88.33 3,533	0,00 û	0.00	88.33 3.533	88.33
	L CIV	<01525	2124 > Crame Testing - 75 to 100 tons Allow four hours per test.	1.00 EA	12.00 12	396.40 396	294.17 294	0.00	0.00	690.57 691	690.57
	L USR	<01525	1111 > Sedan/Pickup (Monthly Cost) Assume 2/3-time Standby	2,00 MO	0.00	0.00	425.16 850	0.00	0.00	425.16 850	425.16
	MIL	<	> LITE SET, 21/1000W, 5KM-GEN, TRLR REF. EP 1110-1-8 5.0 KM 2/1000W, W/GEN SET, TRLR MTD	852.00 HR	0.00	0.00	4.63 3,947	0.00	0.00	4.63 3.947	4.63
			TOTAL General Equipment Expenses	1.00 MO	12	396	8,625	0	0	9,021	9021.36
			TOTAL Job Office Overhead	1.00 MO	12	16,097	9,969	1,564	2,400	30,030	30030.13
			TOTAL Overhead Items - AA		17	16,097	9,969	1,564	2,400	30,030	

Hon 14 Aug 2000 Eff. Date 05/01/99 DETAILED ESTIMATE

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMWZM: Dredging 2 Millcy Confl. Inwater - DMMS Dredging PLAMMING ESTIMATE 01. Snake River DMSS 99

DETAIL PAGE 7

TIME 12:04:51

01.12. Navigation, Ports & Harbors QUANTY UCH HHRS LAB EQUIP MAT OTHER TOTAL COST UNIT COST

01. Snake River DMMS 99

01.12. Navigation, Ports & Harbors 01.12.06. Dredging Rivers 01.12.06.01. Mechanical Dredging 01.12.05.01.001 -. Mob. & Demob. Equipment

01.12.06.01.001-\_01AA. Mob. & Demob. Excavation Dredges

USR AA <	> Mob & Demob.Main Dredging Equip. Clam to Lewiston	1.00 JB	0.00	0.00	1 15.000	0.00	280562.00 280,562	280562.00 280,562 2805	62.00
	TOTAL Mob. & Demob. Excavation Dredges	1.00 JB	0	0	0	0	280,562	280,562 2805	62,00
	TOTAL Mob. & Demob. Equipment	1.00 JB					280.562	280.562.2805	62.00

Hen 14 Aug 2000 Edf. Date 05/01/99 DETAILED ESTIMATE

#### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMSW2M: Dredging 2 Millcy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE 01. Snake River DMMS 99

TIME 12:04:51 DETAIL PAGE 8

03.12. Navigation, Ports & Harbors QUANTY UOM NIRS LAB EQUIP NAT OTHER TOTAL COST UNIT COST

01.12.06.01.002-. Bredge, Haul & Off-load Material Includes a cost of .05 cents per cy for dewatering barge.

USR AA «

01.12.06.01.002-\_0288. Dredging & Haul Mat. to Disposal Includes a cost of .05 cents per cy for dewatering barge.

>	Cost of Dredging Naterial Costs were developed in CEDEP see backup	2000000	CY	0.00	0.00	0.00		1.70	1.70 3,400,000	1.70
TOTAL	Dredging & Haul Mat. to Disposal	2000000	CY	0	0	0	0	3,400,000	3,400,000	1.70
				******						
TOTAL	Dredge, Haul & Off-load Material	2000000	CA	0	0	0	0	3,400,000	3,400,000	1.70
TOTAL	Mechanical Dredging	1.00	EA	0	0	0	0	3,680,562	1,680,562	3680562
TOTAL	Dredging Rivers	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL	Navigation, Ports & Harbors	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL	Snake River DMOAS 99	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL	Dredging 2 Millcy Confl. Inwater	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562

Mon 14 Aug 2000 Eff. Date 05/01/99

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMW2M: Dredging 2 Millcy Confl. Inwater - EMONS Dredging PLANNING ESTIMATE

SUMMARY PAGE 1

TIME 12:04:51

\*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

 	QUANTITY UOM	TOTAL DIRECT	FOOH	ноон	PROP	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DONS 99									
01.12 Navigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01,12,06,01,00101AA Mob. & Demob. Excavation Dredges	1.00 Jn	280,562	2,289	22,628	30,548	0	1,263	339,291	339290.50
TOTAL Mob. & Demob. Equipment	1.00 JB	280,562	2,289	22,628	30,548	0	1,263	339,291	339290.58
01.12.06.01.002- Dredge, Haul & Off-load Material									
01.12.06.01.002028B Dredging & Haul Mat. to Disposal	2000000 CY	3,400,000	27,741	274,219	370,196	0	39,548	4,111,704	2.0
TOTAL Dredge, Haul & Off-load Material	2000000 CY	3,400,000	27,741	274,219	370,196	0	39,548	4,111,704	2.0
TOTAL Mechanical Dredging	1.00 EA	3,680,562	30,010	296,847	400,744	0	42,811	4,450,995	445099
TOTAL Dredging Rivers	1.00 EA	3,680,562	30,030	296,847	400,744	0	42.811	4,450,995	4450995
TOTAL Navigation, Ports & Harbors	1.00 EA	3,680,562	30,030	296.847	400,744	0	42,811	4,450,995	4450991
TOTAL Snake River DMMS 99	1.00 EA	3,680,562	30.030	296,847	400,744	0	42,811	4,450,995	4450995
TOTAL Dredging 2 Hilley Confl. Inwater	1.00 EA	3,680,562	30.030	296,847	400,744	0	42,811	4,450,995	4450995

Mcn 14 Aug 2000 Eff. Date 05/01/99 EFROR REPORT

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMSW2M: Dredging 2 Millcy Confi. Inwater - DMMS Dredging PLADMING ESTIMATE

TIME 12:04:51

ERROR PAGE 1

No errors detected ...

· · · END OF ERROR REPORT · · ·

Mon 14 Aug 2000 Eff. Date 05/01/99 TABLE OF CONTENTS

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DR9M2M: Dredging 2 Millcy Confl. Inwater - DR9K Dredging PLANNING ESTIMATE

TIME 12:04:51 CONTENTS PAGE 1

.....

No Backup Reports...

. . . END TABLE OF CONTENTS . . .

Appendix B Cost Estimates

In-Water 1.b

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DM95725: Dredging 725K cy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:06:51

TITLE PAGE 1

Dredging 725K cy Confl. Inwater DMMS Dredging of Snake & Clearwater Rivers with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NAW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99KA

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confileence of the Snake and Clearwater River, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 1.65.

All material assumed to be disposed of from downstream of Centennial Island lucated near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

#### Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Mork shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb. in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Acress

It is assumed all Disposal Transfer Sites a the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

#### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

#### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 46) River Miles to allow contractors from Portland & Seattle to compete.

#### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve

Hon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMS725: Dredging 725K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:06:51

TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for: Labor: General Decision Number MA990001, Modification #1 dated 1/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM725: Dredging 729K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 12:06:51

SUMMARY PAGE 1

 ***************************************	OUANTITY UON	TOTAL DIRECT	FOOR	ноон	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River INONS 99									
01.12 Navigation, Ports & Harbora									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
TOTAL Hob. & Demob. Equipment	1.00 JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
01.12.06.01.002- Dredge, Haul & Off-load Material									
01.12.06.01.0020288	725000.00 CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,316	2.84
TOTAL Dredge, 'Saul & Off-load Material	725000.00 CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,336	2.84
TOTAL Mechanical Dredging	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Dredging Rivers	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Navigation. Ports & Harbors	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Snake River DMMS 99	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2.366.242	2366242
TOTAL Dredging 725% cy Confl. Inwater	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM725: Dredging 729K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 12:06:51

SUMMARY PAGE 1

 ***************************************	OUANTITY UON	TOTAL DIRECT	FOOR	ноон	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River INONS 99									
01.12 Navigation, Ports & Harbora									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
TOTAL Hob. & Demob. Equipment	1.00 JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
01.12.06.01.002- Dredge, Haul & Off-load Material									
01.12.06.01.0020288	725000.00 CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,316	2.84
TOTAL Dredge, 'Saul & Off-load Material	725000.00 CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,336	2.84
TOTAL Mechanical Dredging	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Dredging Rivers	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Navigation. Ports & Harbors	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Snake River DMMS 99	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2.366.242	2366242
TOTAL Dredging 725% cy Confl. Inwater	1.00 EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DM04725: Dredging 725K cy Confl. Inwater - DMMS Bredging
PLANNING ESTIMATE

TIME 12:06:51

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No errors detected...

· · · END OF ERROR REPORT · · ·

Mon 14 Aug 2000 Eff. Date 05/01/99 CABLE OF CONTENTS

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM725: Dredging 725K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:06:51

CONTENTS PAGE 1

SUMMARY REPORTS

SUPPLARY PAGE

No Detailed Estimate...

No Backup Reports...

. . . END TABLE OF CONTENTS . . .

Appendix B Cost Estimates

In-Water 2.a

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DNOWIN: Dredging 1 Milley Confl. Inwater - DNOS Dredging
PLANNING ESTIMATE

TIME 12:05:47

TITLE PAGE 1

Dredging 1 Millcy Confl. Inwater DMMS Dredging of Smake & Clearwater Rivers with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NWM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Slicott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confinence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Hile 0.00 to Clearwater River Mile 1.65. All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, comsidering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessable without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scdws has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers. approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DM9W1H: Dredging 1 Millcy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:05:47 TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for: Labor: General Decision Number WA990001, Hodification #1 dated 3/1/99, Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT EMBMIM: Dredging 1 Milley Confl. Inwater - EMMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUPMARY - CSI ITEM \*\*

SUMMARY PAGE 1

1,980,562 30,030 160,847 217,144 0 27,386 2,415,970 2415970

1,980,562 30,030 160,847 217,144 0 27,386 2,415,970 2415,970

		QUANTITY UOM	TOTAL DIRECT	FOOR	HOOH	PROF Mi	c Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports &	Harbors									
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dr	edging									
01.12.06.01.001- Mob. & D	emob. Equipment									
01.12.06.01.00101AA Hob	. & Demob. Excavation Dredges	1.00 Jn	280,562	4,254	22,785	30,760	0	3,879	342,241	342240.8
TOTAL Mob	. & Demob. Equipment	1.00 JB	280,562	4,254	22,785	30,760	0	3,879	342,241	342240.8
01.12.06.01.002- Dredge,	Maul & Off-load Material									
01.12.06.01.00202BB Dre	dging & Haul Mat. to Disposal	1000000 CY	1,700,000	25,776	138,062	186,384	0	23,506	2.073.729	2.07
TOTAL Dre	dge. Haul & Off-load Material	1000000 CY	, 1,700,000	25,776	138,062	186, 184	0	23,506	2,073,729	2.07
TOTAL Med	hanical Dredging	1.00 EA	1,980,562	30.030	160,847	217,144	0	27,386	2,415,970	2415970
TOTAL Dre	dging Rivers	1.00 EA	1,980,562	30.030	160,847	217,144	0	27,386	2,415,970	2415970
TOTAL Nav	igation, Ports & Harbors	1.00 EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415976

1.00 EA

1.00 EA

TOTAL Dredging 1 Hilley Confl. Inwater

TOTAL Snake River DMMS 99

TIME 12:05:47

Mom 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMSWIN: Dredging 1 Millcy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:05:47

ERROR PAGE 1

No errors detected ...

. . . END OF ERROR REPORT . . .

LAEOR ID: NWM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Mon	14 Aug	2000
tff.	Date	05/01/99
TABL	B OF CO	INTENTS

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT CHEMIN: Dredging 1 Millcy Confl. Invater - DRMS Dredging PLANNING ESTIMATS

TIME 12:05:47 CONTENTS PAGE 1

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SUMMARY REPORTS

SUMMARY PAGE

No Detailed Estimate...

No Backup Reports...

. . . EMD TABLE OF CONTENTS . . .

In-Water 2.b

Mon 14 Aug 2000 Rff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT IMM125: Dredging 325K cy Contl. Invater - DMM5 Dredging
PLANNING ESTIMATE

TIME 12:07:40 TITLE PAGE 1

.....

Dredging 325K cy Confl. Inwater DMMS Dredging of Snake & Clearwater Rivers with Inwater Disposal

Designed By: Malla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Freparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7,90%

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LABOR ID: NWW99D SQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Mom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM325: Dredging 32K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:07:40

TITLE PAGE 2

.....

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Nighway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all material dredged.

#### Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites A the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

#### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

#### Environmental Concerns:

Durbidity monitoring will be required during the dredging operation. Sieve

Mon 14 Aug 2000 Ef! Date 05/01/99 PROJECT MOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DBM325: Dredging 325K cy Confl. Inwater - DBMS Dredging
PLANNING ESTIMATE

TIME 12:07:40

TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for: Labor: General Decision Number MA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mom 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMN125: Dredging 325K cy Confl. Inwater - DMNS Dredging PLANNING ESTINATE \*\* PROJECT INDIRECT SURNARY - CSI ITEM \*\*

SUPPMARY PAGE 1

TIME 12:07:40

	QUANTITY UOM	TOTAL DIRECT	POOR	ноон	PROF N	lisc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99									
01.12 Navigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01,12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 ЛВ	169,157	4,911	13,926	18,800	0	2,641	209,438	209437.67
TOTAL Nob. & Demob. Equipment	1.00 JB	169,157	4,914	13,926	18,800	0	2,641	209,438	209437.62
01.12.06.01.002- Dredge, Naul & Off-load Material									
01.12.06.01.0020288 Dredging, Haul Mat. to Disposal	325000.00 CY	864,500	25,116	71,169	96,079	0	13.496	1,070,360	3.25
TOTAL Dredge, Haul & Off-load Material	325000.00 CY	864,500	25,116	71,169	96,079	0	13.496	1,070,360	3.25
TOTAL Mechanical Dredging	1.00 EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
TOTAL Dredging Rivers	1.00 EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
TOTAL Navigation, Ports & Harbors	1.00 EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
TOTAL Snake River DMMS 99	1.00 EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
TOTAL Dredging 325K cy Confl. Inwater	1.00 KA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM325: Dredging 325K cy Cosf1. Inwater - DMMS Dredging
PLANNING ESTIMATE

.....

TIME 12:07:40

ERROR PAGE 1

No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

LABOR ID: NAW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Hon 14 Aug 2000 Sff. Date 05/01/99 TABLE OF CONTENTS

## TYI-Service Automated Cost Engineering System (TRACES) PROJECT DMM325: Dredging 325K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:07:40 CONTENTS PAGE 1

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SUMMARY REPORTS

SUMMARY PAGE

Mo Detailed Estimate....

Mo Backup Reports...

. . . END TABLE OF CONTENTS . . .

In-Water 3.a

Mon 14 Aug 2000 Eff. Date 05/01/99

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT CMM()00: Dredging 300K cy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:08:23 TITLE PAGE 1

Dredging 300K cy Confl. Inwater DMMS Dredging of Snake & Clearwater Rivers with Inwater Disposal

Designed By: Walla Walla District CDE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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Nos 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT D00100: Dredging JOOK by Costi. Inwater - D005 Dredging PLANNING ESTIMATE

TIME 12:08:23

TITLE PAGE 2

Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers. located near Snake River Mile 13.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Fort of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, J-8 hour shifts/day, 7 days/week, comsidering 4 holidays.

Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Hiles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve

Fon 14 Aug 2000 Eff. Date 05/01/99 EROJECT NOTES

#### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM300: Dredging 300K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:08:23

TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

Mon 14 Aug 2000 E!f. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM100: Dredging JODK cy Confl. Inwater - DPMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

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TIME 12:08:23 SUMMARY PAGE 1

T INDIRECT SUMMARY - CSI ITEM \*\*

	QUANTITY UOM	TOTAL DIRECT	POOH	ноон	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99									
01.12 Navigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01.12.06.01.00101AA Hob. & Demob. Excavation Dred	dges 1.00 JB	169,157	5,252	13,953	18,836	0	2,684	209,882	209882.45
TOTAL Mob. & Demob. Equipment	1.00 JB	169,157	5,252	13,953	18,836	0	2,684	209,882	209882.45
01.12.06.01.002- Dredge, Hawl & Off-load Material									
01.12.06.01.00202BB Dredging, Haul Mat. to Dispos	sal 300000.00 CY	798,000	24,778	65,822	88,860	0	12,662	990,123	3.30
TOTAL Dredge, Haul & Off-load Hater	rial 300000.00 CV	798,000	24,778	65,822	88,860	0	12,662	990,123	3.30
TOTAL Mechanical Dredging	1.00 EA	967,157	30,030	79,775	107,696	0	15.347	1,200,005	1200005
TOTAL Dredging Rivers	1.00 EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Navigation, Ports & Harbors	1.00 EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Snake River DMMS 99	1.00 EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Dredging 100K cy Confl. Inwa	ter 1.00 EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DRM100: Dredging 300K cy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:08:23 ERROR PAGE 1

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No errors detected ...

. . . END OF ERROR REPORT . . .

LABOR ID: NWM99D BOULP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

. . . END TABLE OF CONTENTS . . .

In-Water 4.a

Mon 14 Aug 2000 Eff. Date 03/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM41P: Dredging 41.5K cy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:09:21

TITLE PAGE 1

Dredging 41.5K cy Confl. Inwater DMMS Dredging of Snake & Clearwater Rivers with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Bffective Date of Pricing: 03/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NWW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPS ID: UP99EA

Mon 14 Aug 2000 Eff. Date 03/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM41P: Dredging 41.5K cy Confl. Inwater - DMMS Dredging PROJECT DMM50 Dredging Project Confl. Confl

TIME 12:09:21

TITLE PAGE 2

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 111 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtine

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of acows for in-water disposal.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamsbells and Scows has been considered, due to the anticipated existence of sit type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

#### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

#### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve

Hen 14 Aug 2000 Eff. Date 03/01/99 PROJECT NOTES

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM41P: Dredging 41.5% cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:09:21 TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for: Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 03/01/99

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM41P: Dredging 41.5% cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

SUMMARY PAGE 1

CREW ID: NAT99A UPB ID: UP99EA

TIME 12:09:21

\*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

 	QUANTITY UOM	TOTAL DIRECT	РООН	ноон	PROF M	isc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMSS 99									
01.12 Navigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Nechanical Dredging									
01.12.06.01.001- Mob. & Demob. Equipment									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	164,469	16,970	14,515	19,595	0	3,798	219,348	219348.09
TOTAL Mob. & Demob. Equipment	1.00 JB	164,469	16,970	14,515	19,595	0	3,798	219,348	219348.09
01.12.06.01.002- Dredge, Haul & Off-load Material									
01.12.06.01.0020288 Dredging, Haul Mat. to Disposal	41500.00 CY	126,575	13,060	11,171	15,081	0	2,923	168,810	4.07
TOTAL Dredge, Haul & Off-load Material	41500.00 CY	126,575	13,060	11,171	15,081	0	2,923	168,810	4.07
TOTAL Mechanical Dredging	1.00 EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Dredging Rivers	1.00 EA	291,044	30,030	25,686	34.676	0	6,722	388,158	388157.92
TOTAL Navigation, Ports & Harbors	1.00 EA	291,044	30.030	25,686	34.676	0	6,722	388,158	388157.92
TOTAL Snake River DMMS 99	1,00 EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Dredging 41.5K cy Confl. Inwater	1.00 EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92

Mon 14 Aug 2000 Eff. Date 03/01/99 ERROR REPORT

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DRM41P: Dredging 41.5K cy Confl. Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:09:21

ERROR PAGE 1

No errors detected ...

. . . END OF ERROR REPORT . . .

LABOR ID: NAM99D EQUIP ID: NAT97C CHEFREY IN DOLLARS CREM ID: NAT97A UPB ID: UP99EA

Hon	14 Aug	2000
Bff.	Date	03/01/99
TABL	E OF C	ONTENTS

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT D0041P: Dredging 41.5K cy Confl. Inwater - D005 Dredging PLANNING ESTIMATE

TIME 12:09:21

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In-Water 5.a

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DRM32M: Dredging 32K by McNary Inwater - DRMS Dredging
PLANNING ESTIMATE

TIME 12:10:09

TITLE PAGE 1

Dredging 32K cy McNary Inwater DMMS Dredging of Smake & Clearwater Rivers, McNary Pool with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hymek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.9%

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LABOR ID: NWW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Non 14 Aug 2000 Sff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DM912H: Dredging 37K cy McMary Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:10:09

TITLE PAGE 2

.....

#### Project Description:

The Columbia and Snake Rivers, McNary Pool dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake River Mile J to Snake River Mile 9, located upstream of the confluence of the Columbia and Snake Rivers. All material assumed to be disposed of between Columbia River Mile 314.5 and 316.5.

#### Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime

Overtime is anticipated. The Government Estimate is based on 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Frime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 10cy clamabell dredges, with the use of scows for in-water disposal.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

#### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Ice Marbor Lock and Dam. approximately 314 River Miles to allow contractors from Portland & Seattle to compete.

#### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:

Son 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT EMOSIUM: Dredging 32E by McMary Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:10:09

TITLE PAGE 3

Labor: General Decision Number MA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DRMJIM: Dredging 32K by McNary Inwater - DRMS Dredging PLANNING ESTIMATE

\*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 12:10:09 SUMMARY PAGE 1

 	QUANTITY UOM	TOTAL DIRECT	РООН	HOOR	PROF	Misc Ta	BOND	TOTAL COST	UNIT COS
01 Snake River DMMS 99									
01.01 Dredging Material Study									
01.01.12 Navigation, Ports & Marbors									
01.01.12.01 Mechanical Dredging									
01.01.12.01.001- Mob. & Demob. Equipment									
01.01.12.01.00101AA Hob. & Demob. Excavation Dredges	1.00 JB	129,182	18,241	11,794	15,922	0	3,229	178,368	178367.6
TOTAL Mob. & Demob. Equipment	1.00 JB	129,182	18,241	11,794	15,922	0	3,229	178,368	178367.6
01.01,12.01.002A Dredging Cost From CEDEP									
01.01.12.01.002A_02BB Dredging Cost From CEDEP	32000.00 CY	85,440	12,065	7,800	10,530	0	2,136	117,971	3.6
TOTAL Bredging Cost From CEDEP	32000.00 CY	85,440	12,065	7,800	10,530	0	2,136	117,971	3.6
TOTAL Mechanical Dredging	1.00 EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.6
TOTAL Navigation, Ports & Harbors	1.00 EA	214,622	30,306	19.594	26,452	0	5,365	296,319	296338.6
TOTAL Dredging Material Study	1.00 EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.6
TOTAL Snake River DRMS 99	1.00 EA	214,622	30,306	19.594	26,452	0	5,365	296,339	296338.6
TOTAL Dredging 32K cy McNary Inwater	1.00 EA	214,622	30,306	19.594	26.452	0	5,365	296.339	296138.6

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROW REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM32H: Dredging 32K cy McMary Invater - DMM5 Dredging
PLANNING ESTIMATE

TIME 12:10:09

ERROR PAGE 1

......

No errors detected...

· · · END OF ERROR REPORT · · ·

Mon 14 Aug 2000 Eff. Date 05/01/99 TABLE OF CONTENTS		Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM32M: Dredging 32K cy McNary Inwater - DMMS Dredging PLANWING ESTIMATE
	SUMMARY REPORTS	SUMMARY PAGE
	PROJECT INDERECT SUMMA	TY - CSI ITEM.

TIME 12:10:09 CONTENTS PAGE 1

No Detailed Estimate...

Mo Backup Reports...

\* \* \* END TABLE OF CONTENTS \* \* \*

Appendix B Cost Estimates

In-Water 6.a

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM2IH: Dredging 2K cy Ice Harb Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:11:05

TITLE PAGE 1

Dredging 2K cy Ice Harb Inwater ENMS Dredging of Snake River, Ice Harbor Pool with Inwater Disposal

Designed By: Walla Malla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NAM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREM ID: NAT99A UPB ID: UP99EA

Mon 14 Aug 2000 2ff. Date 05/01/99 PROJECT NOTES

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM2IH: Dredging 2K or Ice Harb Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:11:05

TITLE PAGE 2

.....

#### Project Description:

The Snake River, Ice Narbor Pool dredging area is located downstream of Lower Nocumental Dan. All material assumed to be disposed of between Snake River Mile 10 to Snake River Mile 2).

#### Basis of Design

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime.

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Mork shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

#### Conditions

This work will take place during winter months. The anticipeted types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia Miver to Lower Monumental Lock and Dam, approximately 165 River Miles to allow contractors from Portland & Seattle to compete.

### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analyzis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

### Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM2IH: Dredging 2K cy Ice Harb Inwater - DMMS Bredging
PLANNING ESTIMATE

TIME 12:11:05

TITLE PAGE 3

Historical Dredging Equipment information.

LABOR ID: NWM99D SQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

# Tri-Service Automated Cost Engineering System ITRACES| PROJECT DHMIN: Dredging 2K cy Ice Narb Inwater - DMMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 12:11:05 SUMPHARY PAGE 1

 	QUANTITY UCH	TOTAL DIRECT	POOR	ноон	PROF H		BOND	TOTAL COST	UNIT COST
								errena etem e	
01 Snake River DRDES 99									
01.12 Navigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Hob. & Demob. Equipment									
01.12.06.01.00101AA Hob. & Demob. Excavation Dredges	1.00 JB	115,563	27,451	11,441	15,445	0	3,454		173354.4
TOTAL Mob. & Demob. Equipment	1.00 JB	115,563	27,451	11.441	15,445	0	3,454	173,354	173354.4
01.12.06.01.002 - Dredge, Haul & Off-load Material									
01.12.06.01.002028B Dredging, Haul Hat, to Disposal	2800.00 CY	12,020	2.855	1,190	1,607	0	359	18,031	9.0
TOTAL Dredge, Haul & Off-load Material	2000.00 CY	12,020	2,855	1,190	1,607	0	359	18,031	9.0
TOTAL Mechanical Dredging	1.00 EA	127,583	30,306	12,631	17,052	0	3,814		191385.4
TOTAL Dredging Rivers	1.00 EA	127,583	30,306	12,631	17,052	0	3,814		191385.4
TOTAL Navigation, Ports & Harbors	1.00 EA	127,583	30,306	12,631	17,052	0	3,814		191385 4
TOTAL Snake River DMMS 99	1.00 EA	127,583	30,306	12,631	17.052	0	3,814	191,385	191185.4
TOTAL Dredging 2K cy Ice Harb Inwater	1.00 EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.4

Hon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM2IH: Dredging 2K by Ice Harb Inwater - DMMS Dredging
FLAMMING ESTIMATE

TIME 12:11:05 ERROR PAGE 1

No errors detected...

. . . END OF ERROR REPORT . . .

LABOR ID: NW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREM ID: NAT99A UPB ID: UP99EA

Mon	14 3	gui	2000
Ett.	Dat	e	05/01/99
TABL	E OF	C	ONTENTS

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DOORTH: Dredging 2K by Ice Harb Invater - DRMS Dredging PLANNING ESTIMATE

TIME 12:11:05

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No Detailed Estimate...

Mo Backup Reports...

. . . END TABLE OF CONTENTS . . .

In-Water 7.a

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT EMMAZEM: Dredging JK cy Loho Inwater - DRMS Dredging
PLANNING ESTIMATE

TIME 12:11:55

TITLE PAGE 1

Dredging 2K cy LoMo Inwater DRMS Dredging of Snake River, Lower Monumental Pool

with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7,90%

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LABOR ID: NAM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEMIRM: Dredging 2K cy LoMo Invater - DMMS Dredging PLANNING ESTIMATE

TIME 12:11:55

TITLE PAGE 2

#### Project Description:

The Snake River, Lower Monumental Pool dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake River confluence. All material assumed to be disposed of between Snake River Mile 42 to Snake River Mile 47.

#### Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

#### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

## Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Little Goose Lock and Dam, approximately 194 River Hiles to allow contractors from Portland & Seattle to compete.

### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

### Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.

Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT EMM2KM: Dredging 2K cy LoMo Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:11:55 TITLE PAGE 3

Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

LABOR ID: NAW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

# Tri-Service Automated Cost Engineering System (TNACES) PROJECT DMM2KM: Dredging 2K cy LoMo Inwater - DMMS Dredging PLANNING ESTIMATE

TIME 12:11:55

	·· PROJEC	PLANNING E		т.					SUPPLARY	PAGE 1
		NOU YTITHAUD	TOTAL DIRECT	FOOH	ноон	PROF Mi	sc Ta	BOND	TOTAL COST	UNIT COST
01	Snake River DMMS 99									
01.1	12 Navigation, Ports & Harbors									
01.2	12.06 Dredging Rivers									
01.7	12.06.01 Mechanical Dredging									
01.3	12.06.01.001- Mob. & Demob. Equipment									
01.1	12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	146,272	27,825	13,928	18,802	0	4,021	210,848	210848.01
	TOTAL Mob. & Demob. Equipment	1.00 JB	146,272	27,825	13,928	18,802	0	4,021	210,848	210848.01
01.1	12.06.01.002- Dredge, Haul & Off-load Material									
01.3	12.06.01.0020288 Dredging, Haul Mat. to Disposal	2000.00 CY	13,040	2,481	1,242	1,676	0	358	18.797	9.40
	TOTAL Dredge, Haul & Off-load Material	2000.00 CY	13,040	2,481	1.242	1,676	0	358	18,797	9.40
	TOTAL Mechanical Dredging	1.00 EA	159.312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Dredging Rivers	1.00 EA	159.312	30.306	15,169	20,479	0	4,379	229.645	229644.90
	TOTAL Navigation, Ports & Harbors	1.00 EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Snake River DMMS 99	1.00 EA	159.312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Dredging 2K cy LoMo Inwater	1.00 EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DROGEN: Dredging 2K cy LoMo Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:11:55

ERROR PAGE 1

No errors detected ...

. . . END OF ERROR REPORT . . .

LABOR ID: NAM99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Mon 14 Aug 2000 Eff. Date 05/01/99 TABLE OF CONTENTS

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMM2XM: Dredging 2K cy LoMo Inwater - DMMS Dredging PLANNING ESTIMATE

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SUMMARY PAGE

SUMMARY REPORTS

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No Eackup Reports...

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Appendix B Cost Estimates In-Water 8.a

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM4LG: Dredging 4E or Goose Invater - DMMS Bredging
PLANNING ESTIMATE

TIME 12:26:42

TITLE PAGE 1

Dredging 4% cy Goose Inwater DRMS Dredging of Snake River, Little Goose Pool with Inwater Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

M C A C E S F O R M I N D O M S Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c Project Description:

The Snake River, Little Goose Pool dredging area is located downstream of Lower Granite Dam and at Schultz Bar, located near Snake River Mile 100. All material assumed to be disposed of between Snake River Mile 71 to Snake River Mile 83.

Basis of Design:

Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Nork shall be conducted on a 24 hr/day, J-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Peb, in any given year, due to the fish window requirements.

Sub Contracting Plan:

Nr Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:

Common dredging methods using 19cy clamshell dredges, with the use of acova for in-water disposal.

Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clanshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment
Mobilization will be from the Mouth of the Columbia River to Lower Granite
Lock and Dam, approximately 4)1 River Niles to allow contractors from
Portland & Seattle to compete.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.

Mon 14 Aug 2000 Eff. Date 05/01/99 EMOJECT NOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DRM4LG: Dredging 4K by Goose Inwater - DRMS Bredging
PLANNING ESTIMATE

TIME 12:26:42

TITLE PAGE 3

Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEMALG: Dredging 4K by Goose Inwater - DRMS Dredging PLANNING ESTIMATE \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 12:26:42 SUMMARY PAGE 1

***************************************	NOO YTITKAUQ	TOTAL DIRECT	POOH	HOOH	PROF M	sc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99									
01.12 Mavigation, Ports & Harbors									
01.12.06 Dredging Rivers									
01.12.06.01 Mechanical Dredging									
01.12.06.01.001- Hob. & Demob. Equipment									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1,00 JB	155,506	27,006	14,601	19.711	0	4,143	220,968	220967.8
TOTAL Mob. & Demob. Equipment	1.00 Jm	155,506	27,006	14,601	19,711	0	4,143	220,968	220967.8
01.12.06.01.002- Dredge, Haul & Off-load Material									
01.12.06.01.0020288 Dredging, Haul Mat. to Disposal	4000.00 CY	19,000	3,100	1.784	2,408	0	506	26,998	6.7
TOTAL Dredge, Haul & Off-load Material	4000.00 CY	19,000	3,300	1,784	2,408	0	506	26,998	6.7
TOTAL Mechanical Dredging	1.00 EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.1
TOTAL Dredging Rivers	1.00 EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.1
TOTAL Navigation, Ports & Harbors	1.00 EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.1
TOTAL Snake River DMMS 99	1.00 EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.1
TOTAL Dredging 4K cy Goose Inwater	1.00 EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.1

Non 14 Aug 2000 Eff Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DBM4LG: Dredging 4K cy Goose Invater - DBMS Dredging
PLANNING ESTIMATE

TIME 12:26:42

ERROR PAGE 1

No errors detected ...

· · · END OF ERROR REPORT · · ·

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***************************************	SUMMARY REPORTS	SUMMARY PAGE	***************************************
	PROJECT INDIRECT SUMMAR	F - CSI ITEM1	
No Detailed Estimate			
No Backup Reports			
		· · END TABLE OF CONTENTS · · ·	

Appendix B Cost Estimates

**Upland Summary** 

# Dredged Material Management Study Dredging of Snake and Clearwater Rivers Upland Disposal

	Abanta attaches				
	Description	Years	Estimated Quantity	U/M	Total \$ Costs Each Year of Dredging
Item 1 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 1.a	Initial Construction of Chief Timothy Transfer Site and Page Creek Upland disposal Site, template dredge operation, and upland disposal at Chief Timothy	1	2,000,000	су	\$12,313,000
Item 1.b	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	2	2,000,000	су	\$21,095,000
Item 1.c	Template dredge operation and upland disposal at Page Creek	3-20	2,000,000	су	\$20,232,000
Item 1.d	Template maintenance dredge operation and upland disposal at Page Creek	21-end	725,000	су	\$8,309,000
Item 2 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 2.a	Initial Construction of Chief Timothy Transfer Site and Page Creek Upland Disposal Site, template dredge operation, and upland disposal at Chief Timothy	1	1,000,000	су	\$8,798,000
Item 2.b	Template dredge operation and upland disposal at Chief Timothy	2	1,000,000	су	\$3,896,000
Item 2.c	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	3	1,000,000	су	\$11,170,000
Item 2.d	Template dredge operation and upland disposal at Page Creek	4-10	1,000,000	су	\$10,307,000
Item 2.e	Template maintenance dredge operation and upland disposal at Page Creek	11-end	325,000	су	\$5,737,000
Item 3 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 3.a	Initial Construction Jose Upland Disposal Site, template dredge operation, and upland disposal at Joso	1	300,000	су	\$9,738,000
Item 3.b	Template dredge operation and upland disposal at Joso	2-20	300,000	су	\$4,824,000
Item 3.c	Initial Construction of Chief Timothy Transfer Site, template dredge operation, and upland disposal at Chief Timothy	21	300,000	су	\$5,831,000
Item 3.d	Template dredge operation and upland disposal at Chief Timothy	22-26	300,000	су	\$1,682,000
Item 3.e	Initial Construction of Page Creek Upland Disposal Site, template dredge operation, and disposal at Chief Timothy	27	300,000	су	\$2,435,000

	Dredged Material Management Study Dredging of Snake and Clearwa Upland Disposal	ter Rivers			Revision #/ 8/31/0
Item 3.f	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	28	300,000	су	\$4,480,000
Item 3.g	Template dredge operation and upland disposal at Page Creek	29-end	300,000	су	\$3,617,000
Item 4 - 0	Confluence Dredging Snake & Clearwater Rivers				
Item 4.a	Initial Construction Jose Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	5	41,500	су	\$3,199,000
Item 4.b	Template maintenance dredge operation and upland disposal at Joso	10	41,500	су	\$1,000,000
Item 4.c	Template maintenance dredge operation and upland disposal at Joso	20	41,500	су	\$1,000,000
Item 4.d	Template maintenance dredge operation and upland disposal at Joso	10-yr intervals - end	41,500	су	\$1,000,000
Item 5 - [	Oredging McNary Pool				
Item 5.a	Initial Construction Jose Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	1	32,000	су	\$2,882,000
Item 5.b	Template maintenance dredge operation and upland disposal at Joso	2-end at 2-yr intervals	32,000	су	\$683,000
Item 6 - I	Oredging Ice Harbor Pool				
Item 6.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	2,000	су	\$204,000
Item 7 - [	Oredging Lower Monumental Pool				
Item 7.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	2,000	су	\$208,000
ltem 8 - [	Oredging Little Goose Pool				
Item 8.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	4,000	су	\$244,000

Revision #2 8/31/01

# Dredged Material Management Study Dredging of Snake and Clearwater Rivers Upland Disposal

## Item 9 - Dredging contaminated material

Item 9.a	Initial Construction Joso Contingency Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	Initial	7,000	су	\$11,613,000
Item 9.b	Template maintenance dredge operation and upland disposal at Joso	Subsequent Operations	7,000	су	\$230,000

Note: Total Costs include Overhead and Profit.

Escalation and contingencies are not included.

Item #1 2,000,000 cy option requires a significant amount of Dredging Plant to complete project within construction window. From Historical information this is a high risk option. Dependent on Contractor ability to provide equipment which could effect cost.

Points of Contact:

Lead Estimator - Karl Pankaskie (509)527-7517

Estimator - Julie Davin (509)527-7514

**Upland 1 Proration** 

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
2,000,000	cy @ Ch	ief Timothy							
Mechanica	I Dredging,	River to Transf	fer Site (Chief	Timothy)					
	Costs	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624
Disposal (I	Page Creek	Transfer (Chie	f Timothy) Sit	e Developmen	t		Section of the section of	The Avended States	53/4/12/15/5/5/70/
	Costs	\$4,901,992	\$863,181	\$0	\$0	\$0	\$0	\$0	\$0
Transfer M	laterial to D	isposal Site (Pa	ige Creek) fro	m Transfer Sit	e (Chief Timot	hy)			
	Costs		\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859
Mechanica	I Dredging, Costs	ef Timothy River to Trans		1		*			
Mechanica	I Dredging, Costs laterial to D	River to Trans		1			٥	0	
Mechanica	I Dredging, Costs	River to Trans isposal Site (Pa \$0	age Creek) fro 0	m Transfer Sit	0	0	0	0	0
Mechanica Transfer N	I Dredging, Costs laterial to D Costs	River to Trans isposal Site (Pa \$0	age Creek) fro 0 \$0	m Transfer Sit 0 \$0	0 \$0	0 \$0	\$0	\$0	\$0
Mechanica Transfer N Construction	I Dredging, Costs laterial to D Costs	River to Trans isposal Site (Pa \$0 \$0 \$4,901,992	age Creek) fro 0 \$0 \$863,181	m Transfer Sit 0 \$0 \$0	0 \$0 \$0	0 \$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
Mechanica Transfer N	I Dredging, Costs laterial to D Costs	River to Trans isposal Site (Pa \$0	age Creek) fro 0 \$0	m Transfer Sit 0 \$0	0 \$0	0 \$0	\$0	\$0	\$0
Mechanica Transfer N Construction	I Dredging, Costs laterial to D Costs	River to Trans isposal Site (Pa \$0 \$0 \$4,901,992	age Creek) fro 0 \$0 \$863,181	m Transfer Sit 0 \$0 \$0	0 \$0 \$0	0 \$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
Mechanica Transfer M Construction	I Dredging, Costs laterial to D Costs	River to Trans isposal Site (Pa \$0 \$0 \$4,901,992 \$7,410,624 0	age Creek) fro 0 \$0 \$863,181 \$20,231,483	m Transfer Sit 0 \$0 \$0 \$20,231,483	\$0 \$0 \$20,231,483 \$0	0 \$0 \$0 \$20,231,483	\$0 \$0 \$20,231,483	\$0 \$0 \$20,231,483 \$0	\$0 \$0 \$20,231,483

FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10	FY09
\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624	\$7,410,624
s	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859	\$12,820,859
	0	0	0	0	0	0	0	0	0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$20,231,48	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$20,231,48	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483	\$20,231,483
FY1	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10	FY09

FY28	FY27	FY26	FY25	FY24	FY23	FY22	FY21	FY20	FY19
			238					!	
								\$7,410,624	\$7,410,624
								\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,820,859	\$12,820,859
\$3,635,90	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907		
\$4,672,20	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	0	0
\$ \$ \$8,308,11	\$0 \$0 \$8,308,112	\$0 \$0 \$20,231,483	\$0 \$0 \$20,231,483						
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$8,308,11	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$20,231,483	\$20,231,483
FY2	FY27	FY26	FY25	FY24	FY23	FY22	FY21	FY20	FY19

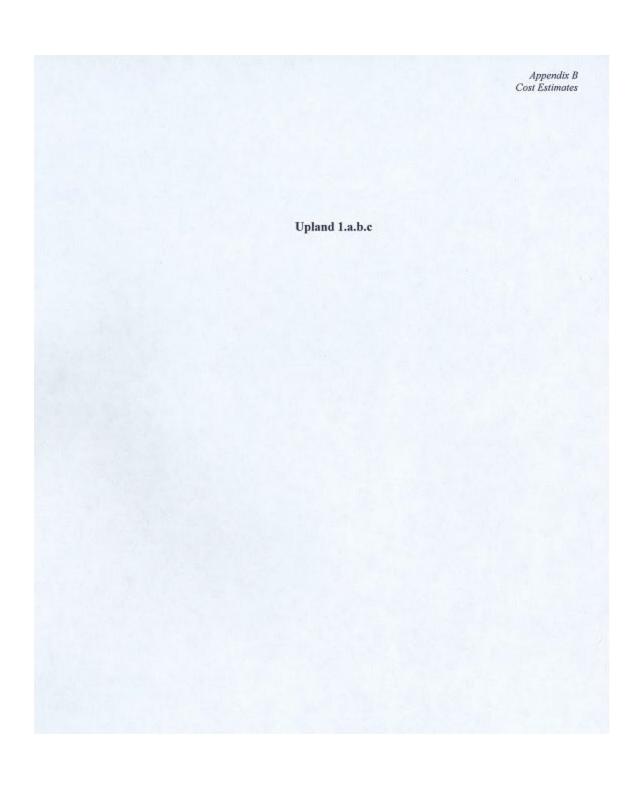
FY39	FY38	FY37	FY36	FY35	FY34	FY33	FY32	FY31	FY30	FY29
SC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$3,635,90	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907
\$4,672,20	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205
\$6 \$8,308,11	\$0 \$0 \$8,308,112									
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$8,308,11	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112
FY3	FY38	FY37	FY36	FY35	FY34	FY33	FY32	FY31	FY30	FY29

FY50	FY49	FY48	FY47	FY46	FY45	FY44	FY43	FY42	FY41	FY40
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907
\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205
\$0 \$0 \$8,308,112										
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112
FY50	FY49	FY48	FY47	FY46	FY45	FY44	FY43	FY42	FY41	FY40

FY61	FY60	FY59	FY58	FY57	FY56	FY55	FY54	FY53	FY52	FY51
								U U		
SC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$3,635,90	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907
\$4,672,20	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205
\$ \$ \$8,308,11	\$0 \$0 \$8,308,112									
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$8,308,11	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112
FY6	FY60	FY59	FY58	FY57	FY56	FY55	FY54	FY53	FY52	FY51

FY62	FY63	FY64	FY65	FY66	FY67	FY68	FY69	FY70	FY71	FY72
\$0	\$0	\$0	\$0	\$0	\$0	so	\$0	\$0	\$0	\$0
\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907	\$3,635,907
\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205	\$4,672,205
\$0 \$0										
\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112
\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112	\$8,308,112		\$8,308,112		\$8,308,112	\$8,308,11
FY62	FY63	FY64	FY65	FY66	FY67	FY68	FY69	FY70	FY71	FY72

Subtotal 74 Years	FY74	FY73
\$0		
\$148,212,480		
\$5,765,173		
\$243,596,321	\$0	\$0
\$196,338,978	\$3,635,907	\$3,635,907
\$252,299,070	\$4,672,205	\$4,672,205
\$0	\$0	\$0
\$5,765,173	\$0	\$0
\$840,446,849	\$8,308,112	\$8,308,112
	\$0	\$0
\$846,212,022	\$8,308,112	\$8,308,112
74 Years	FY74	FY73



Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DM9812M: Deedging 2-M CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 2,000,000 CV OF DREDGE MAT

TIME 11:35:35 TITLE PAGE 1

Dredging 2-M CuY Confl. Upland D DPMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Nynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.65. All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

### Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CERDEP)

#### Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Mork shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during year one.

### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station and the Disposal Area will be constructed during the first year. The first years dredging material will be used for development of the Transfer Station. After year one the dredging material will be offloaded from the barges on to the Transfer Site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the final Disposal area throughout the remainder of the year.

#### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than

Hon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMUZM: Dredging 2-M CuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 2,000,000 CY OF DREDGE MAT

TIME 11:35:35 TITLE PAGE 3

normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Dredging Plant
Equipment Mobilization will be from the Mouth of the Columbia River to the
Confluence of the Snake and Clearwater Rivers, approximately 460 River Miles
to allow contractors from Portland & Seattle to compete. All equipment is
considered owned - no rental equipment considered. All equipment other than
dredging plant rates were computed based on the EP 1110-1-8. All equipment
other than Dredging Plant mob and demob costs computed as 5% of the direct
costs.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:

Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP), Bistorical Dredging Equipment information, and EP 1110-1-8.

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEBUUN: Dredging 2-N CuY Confl. Upland D - DMMS Dredging PLANNING ESTINATE - 2.000.000 CY OF DREDGE NAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:35:35 SUMMARY PAGE 1

 	QUANTITY UCH	TOTAL DIRECT	Pooli	ноон	PROF Mi	sc Ta	BOND	TOTAL COST	MIT COST
01 SNAKE RIVER DRDKS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.00101AA Nob. & Demob. Excavation Dredges	1.00 JB	276,938		15,232	27,988	0	3,015	350,866	350866.
TOTAL NOB. & DEMOB. AND PREWORK	1.00 JB	276,938		15,232	27,988	0	3,015	350,866	350866.
01.12.06.01.002 - DREDGE, HAUL 6 OFF-LOAD MATERIAL									
01.12.06.01.002028B Dredging & Haul Mat to Disposal	2000000 CY	3,700,000	370,000	203,500	373,931	0	40,281	4,687,712	2.
01.12.06.01.00202EB Offloading Barge, with Clamshell	2000000 CY	1,377,339		75,754	139,197	0	1071075	1,745,019	0.
01.12.06.01.00202EF Push Mat to Dry Area, by Dozer	2000000 CY	494,910	49,491	27,220	50.017	0	5,188	627,026	0.
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000000 CY	5,572,249		306,474	563,145	0	60,664	7,059,757	3
TOTAL MECH DREDGING, RIVER TO TRANSFER	2000000 CY	5,849,187	584,919			0	63,679	7,410,624	3
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AC Load, Haul, Spread in Disposal S	2000000 BCY		1.452,735		906,325	0	97,753	12,698,594	6
TOTAL HAUL MAT. TO DISPOSAL SITE	2000000 CY		1,452,735		906.325	0	97.753	12,698,594	6.
01.12.06.02.002- RESTORATION OF SITES									
01.12.06.02.00202AA Upland Site, Hydro Seeding	12.00 AC	22,800		1,311	2,134	0	230	29,895	2491
01.12.06.02.00202AC Upland Site, Top Soil, L,H,S	9100.00 BCY			1.370	2,229	0	240	31.238	1
01.12.06.02.00202BA Transfer Site, Hydro Seeding 01.12.06.02.00202BC Transfer Site, Top Soil, L.H.S	12.00 AC 9100.00 BCY	22,800		1.311	2,134	0	230	29.895	2491
				1,570	4,449		240	31,238	3
TOTAL RESTORATION OF SITES	24.00 AC	93.248	13,987	5,362	8,726	0	941	122,265	5094
TOTAL TRANSFER MATERIAL TO DISPOSAL	2000000 CY	9,778,148	1,466,722	562,243	915,051	0	98,694	12,820,859	- 6
				100					

LABOR ID: NAT99A EQUIP ID: NAT97C

01.12.06.03 DISPOSAL/TRANSFER DEV, CHIEF TIM 01.12.06.03.001- TRANS, RIVER DIKE & SP BARGE SLIP

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DESCUM: Dredging 2-B CuY Confl. Upland D - DRMS Dredging PLANNING ESTIMATE - 2,000,000 CY OF DREDGE MAY \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

SUNMARY PAGE 2

TIME 11:35:35

		QUANTITY UON	TOTAL DIRECT	POOH	HOOH	PROF 1	tisc Ta	BOND	TOTAL COST	UNIT COST
 	***************************************	*********								
01.12.06.03.00102AA	T-RS Berm, Earth Fill, L.M.D.&C	40000.00 BCY	193,105	28,966	11,104	20,403	0	2.411	255.988	6.40
01.12.06.03.00102AB	T-RS Barge Tie-off, Sheet Piling	52000.00 SF	1,006,485	150,973	57,873	106,341	0	12,566	1,334,239	25.66
01.12.06.01.00102DB	T-RS Barge Tie-off, (Mood pole)	576.00 LP	22,883	3,432	1,316	2,418	0	286	30,334	52.66
01.12.06.03.00103AB	T-Barge Tie-off, Piling Anchr-Blk	780.00 CY	167,151	25,073	9,611	17,661	0	2,087	221,583	284.08
TOTAL	TRANS, RIVER DIKE & SP BARGE SLIP	2600.00 LF	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
									18	
01.12.06.03.002- TRAN	SPER DIKE, (LAND SIDE)									
01.12.06.03.00202AA	T-Berm, Earth Fill, L.H.D.&C	56260.00 BCY	272,548	40.882	15.672	28,796	0	3.403	361,301	6.42
01.12.06.03.00202BA	T-Berm, Barth Fill, Geotextile	12250.00 SY	36,517	5.478	2,100	3,858	n	456	48,408	3.95
01.12.06.03.00202KK		5300.00 LF	39,201	5,880	2,254	4,142	0	489	51,967	9.81
01.12.06.03.00202ME	T-Berm, R-Prot, RipRap Beddg, 6"Thk	520.00 CY	6,780	1,017	390	716	0	85	8,987	17.28
01.12.06.03.00202RR	T-Bern, R-Prot, RipRep Rock 2'Thk	2075.00 CY	76,339	11,451	4,390	8.066	0	953	101,198	48.77
	7-Berm, Seeding Earth Fill	2.50 ACR	4,750	713	273	502	0	59	6,297	2518.72
TOTAL	TRANSFER DIKE, (LAND SIDE)	5150.00 LF	436,135	65,420	25,078	46,080	0	5,445	578,159	112.26
01.12.06.03.003- TRAN	S,SETTLEMENTATION PONDS,4 EA									
01.12.06.03.003- 02AA	T-Berm, Earth Fill, Settling Pond	2800.00 BCY	13,265	1,990	763	1,402	0	166	17,584	6.28
	T-Bern, Earth Fill, Detentin Pond	26000.00 BCY	126,826	19,024	7,293	13,400	0	1,583	168,126	
	T-Bern, S&D Pond, Overflow ConcStr	8.00 EA	50,724	7,609	2,917	5,359	0	633	67.242	
	T-Berm, S&D Pond, Pump Col ConcStr	4.00 EA	20.989	3,148	1,207	2,218	0	262	27,824	6955.97
	T-Berm, S&D Pond, Pumps Pads	4.00 EA	19,883	2,982	1,143	2,101	0	248	26,358	6589.41
TOTAL	, TRANS, SETTLEMENTATION PONDS, 4 EA	1.00 SF	231,687	34,753	13.322	24,479	0	2.893	307,134	307134.05
01.12.06.03.004- TRAN	NS (BRIDGE) CRANE RAIL, UNL BARG									
01.12.06.01.00402BA	T-BCR Set &Drive H-12x84 Columns	8400.00 LP	256,245	38,437	14,734	27,074	0	3.199	339,689	40.44
01.12.06.03.00403AA	T-BCR Slevated Concrete Beams	1640.00 CY	675,291	101,294	38,829	71.349	0	8,431	895, 196	
01.12.06.03.00405AA	T-BCR Crane Rails -Bridge Crane	4200.00 LF	140,877	21,131	B.100	14.884	0	1,759	186,752	
01.12.06.01.00413AA	Purchased Crane Cost in Eq Rates	2.00 EA	0		0	0	0	0	0	
TOTAL	L TRANS(BRIDGE)CRANE RAIL, UNL BARG	2100.00 LF	1,072,414	160,862	61,664	113,307	0	13,389	1,421,637	676.97
01.12.06.03.005- BRID	OGE FOR HIGHWAY CROSSING									
01.12.06.03.005- 02AA	Ramps, Earthern Fill, L.H.D.4C	18600.00 BCY	88,972	13,346	5,116	9,401	0	1,111	117,946	6.34
	Ramps, Earthern Fill, Prep	560.00 BCY	1,253	188	72	132	0	16	1.661	
	Ramps, Compt Gravel Fill, 6° Thk	560.00 CY	7,301	1,095	420	771	0	91		
	Bridge & Abuts, Concr 30 W 46 L	1260.00 SF	126,000	18,900	7,245	13,313	0	1,573	9,679 167,031	

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMBUJM: Deedging 2-N CuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 2.000.000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

SUMMARY PAGE 3

TIME 11:35:35

 		QUANTITY DOM	TOTAL DIRECT	FOOH	ноон	PROP	Misc Ta	BOND	TOTAL COST	UNIT COS
01.12.06.03.006- UPLA	ND DISPOSAL HAUL ROAD									
	Access Road, Clear & Grub	10.00 ACR	12,788	1,918	735	1,351	0	160	16,952	1695.2
	Access Road, Cut & Fill - L.H.S	75000.00 BCY	198,747	29,812	11,428	20,999	0	2,481	263,468	3.5
	Access Road, Earthern Fill, Prep		6,935	1.040	399	733		87	9,193	2.9
	Access Road, Gravel Fill, 6"Thk	3100.00 CY	40,417	6,063	2,324	4,270	. 0	505	53.578	17.2
	Access Road, Culvert 18°Dia 10Ea		11,324	1,699	651	1,197	0	141	15,012	30.0
01.12.06.03.00602EC		7700.00 LF	14,214	2,132	817	1,502	0	177	18,843	2.4
01.12.06.03.00602TA	Access Road, Seeding	5.00 ACR	9,500	1,425	546	1,004	. 0	119	12,594	2518.7
TOTAL	UPLAND DISPOSAL HAUL ROAD	7000.00 LF	293,925	44,089	16,901	31,055	0	3.670	389,640	55.6
01.12.06.03.007- UPLA	ND DISPOSAL SITE DEVELOPMENT									
01.12.06.03.00702AA	D-Containment Berm, Dike	2700.00 CY	6,864	1,030	395	725	0	86	9.099	3.3
01.12.06.03.00702BA	D-Containment Berm, Geotextile	6800.00 SY	20,271	3.041	1.166		0	253	26,872	3.9
01.12.06.03.007- 02EA	D-Containment Berm, Culvert12*Dia	280.00 LF	4,762	714	274	503	0	59	6,313	22.5
	D-Containment Berm, Culvert18'Dia	500.00 LF	11,324	1,699	651		0	141	15,012	30.0
	D-Containment Berm, Top Soil	1000.00 CY	2,542	381	146		0	32	3.370	3.1
	D-Containment Berm, Seeding	2.50 ACR	4,750	713	273	502	0	59	6,297	2518.7
TOTAL	UPLAND DISPOSAL SITE DEVELOPMENT	2000000 CY	50,513	7,577	2,905	5,337	0	631	66,963	0.0
			********							
TOTAL	DISPOSAL/TRANSFER DEV, CHIEF TIM	2000000 CY	3,697,826	554,674	212,625	390,698	0	46,169	4,901,992	2.4
01.12.06.99 DISPOSAL/	TRANSPER CAP, CHIEP TIM									
01.12.06.99.001- RCC	COMPACTED CONCRETE CAP									
	RCC Prep, Grade and Compact Site		18,073	2,711	1,039	1,910	0	335	24,068	0.0
	RCC Compacted Gravel Fill, 6'Thk		65,924	9,889	3,791	6,965	0	1,222	87,790	17.3
01.12.06.99.0010388	RCC Compacted Concrete, 1' Thick	10111.00 CY	564,189	84,628	32,441		0	10,455	751.323	74.3
TOTAL	RCC COMPACTED CONCRETE CAP	10111.00 CY	648,186	97,228	37,271	68,485	0	12,012	863,181	85.)
TOTAL	DISPOSAL/TRANSFER CAP, CHIEF TIM	272997.00 SF	648,186	97,228	37,271	68,485	0	12.012	863,181	3.1
TOTAL	DREDGING RIVERS	2000000 CY	19,973,347				0	220,553	25,996,655	13.0
TOTAL	NAVIGATION, PORTS & HARBORS		19,973,347	2,703.543	1,133,844	1,965,368	0	220,553	25,996,655	
TOTAL	, SNAKE RIVER DHMS 99		19,973,347	2,703,543	1,133,844	1.965.368		220,553	25,996,655	
TOTAL	Dredging 2-H CuY Confl. Upland D		19,973,347					220,553	25,996,655	

Mom 14 Aug 2000 Eff. Date 05/01/99 ERMOR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT EMBUZM: Dredging 2-M CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 2,000,000 CY OF DREDGE MAT

TIME 11:35:35

ERROR PAGE 1

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No errors detected...

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LABOR ID: NAT99A EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPS ID: UP99EA

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## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMUZM: Dredging 2-H CuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 2,000,000 CY OF DREDGE MAT

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SUMMARY PAGE

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Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMU07: Dredging 725tCuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 725,000 CY OF DREDGE HAT

TIME 11:41:09

TITLE PAGE 1

Dredging 725tCuY Confl. Upland D DRMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walls Malls District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7,90%

M C A C E S F O R W I N D O W S Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c Project Description.

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Righmay 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All naterial assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb. in any given year, due to the fish window requirements.

Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:

Common dredging methods using 15cy clamahell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Non 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DM9807: Dredging 725tCuY Cosfl. Opland D - DMMS Dredging PLANNING ESTHATE - 725,000 CY OF DREDGE MAT

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TITLE PAGE }

Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Scattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns: Turbidity monitoring will be required:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:

Total costs included Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 1/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEGUID7: Dredging 725tCuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 725,000 CY OF DREDGE HAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:41:09

 	QUANTITY UOM		FOOR	ноон	PROF M	isc Ta	BOND	TOTAL COST (	MIT COST
01 SNAKE RIVER DMMS 99				-					
01.12 NAVIGATION, PORTS & MARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MBCH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREMORK									
01.12.06.01.00101AA Hob. & Demob. Excavation Dredges	1.00 JB	249,956	24,996	13,748	25,261	0	3,205	317, 166	317165.5
TOTAL MOS. & DEMOS. AND PREMORE	1.00 JB	249,956	24,996	13,748	25,261	0	3,205	317,166	317165.5
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.0020288 Dredging & Haul Mat to Disposal		1,906,750	190.675	104,871	192,701	0	24,450	2,419,448	3.
01.12.06.01.00202EB Offloading Barge, with Clamshell 01.12.06.01.00202EP Fush Mat to Dry Area, by Dozer		521,382 187,346	52,138 18,735	28,676 10,304	52,692 18,934	0	6,686 2,402	661,573 237,720	0.
TOTAL DREDGE, MAUL & OFF-LOAD MATERIAL	725000.00 CY	2,615,477	261,548	143,851	264.327	0	33,539	3,318,741	4.
TOTAL MECH DREDGING, RIVER TO TRANSFER	725000.00 CY	2,865,433	286,543	157,599	289,588	0	36,744	3,635,907	5.1
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AC Load, Haul, Spread in Disposal S	725000.00 BCY	3,510,963	526,641	201,880	328,560	0	43,885	4,611,933	6.
TOTAL MAUL MAT. TO DISPOSAL SITE	725000.00 CY	3,510,963	526,644	201,880	328,560	0	43,885	4,611,933	6.
01.12.06.02.002- RESTORATION OF SITES									
01.12.06.02.00202AA Upland Site, Hydro Seeding 01.12.06.02.00202AC Upland Site, Top Soil, L.H.S	5.00 AC 4833.00 BCY	9,500 13,442	1,425 2,016	546 773	889 1,258	0	119 168	12,479	2495.
01.12.06.02.00202BA Transfer Site, Hydro Seeding	5.00 AC	9,500	1,425	546	889	0	119	17,657 12,479	2495.
01.12.06.02.00202BC Transfer Site, Top Soil, L,H,S	4833.00 BCY	13,442	2,016	773	1.258	0	168	17,657	3.
TOTAL RESTORATION OF SITES	10.00 AC	45,884	6,883	2,638	4,294	0	574	60,272	6027.
TOTAL TRANSFER MATERIAL TO DISPOSAL	725000.00 CY	3,556,847	533,527	204,519	332,854	0	44,458	4,672,205	6.
TOTAL DREDGING RIVERS	725000.00 CY	6,422,280	820.070	362,118	622,442	0	81,202	8,308,112	11.
TOTAL NAVIGATION, PORTS & HARBORS			820,070		622,442	0	81,202	8,308,112	

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMU07: Dredging 725tCuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 725.000 CY OF DREDGE MAT

SUMMARY PAGE 2

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\*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

QUANTITY USM TOTAL DIRECT FOOR HOOK FROF Misc Ta BOND TOTAL COST UNIT COST

TOTAL SNAKE RIVER DMMS 99 6,422,280 820,070 362,118 622,442 0 81,202 8,308,112

TOTAL Dredging 725tCuY Confl. Upland D 6,422,280 820,070 362,118 622,442 0 81,202 8,308,112

Mon 14 Aug 2000 Eff. Date 05/01/99 ERIOR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMU07: Dredging 725tCuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 725,000 CY OF DREDGE MAT

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## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMU07: Dredging 725tCuY Confl. Upland D - DMMS Dredging FLANNING ESTIMATE - 725,000 CY OF DREDGE MAT

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**Upland 2 Proration** 

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
1,000,000	cy @ Chi	ef Timothy								
Mechanica	I Dredging,	River to Transf	er Site (Chie	f Timothy)						
	Costs	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990	\$3,895,990
Disposal (F	Page Creek)	Transfer (Chie	f Timothy) S	ite Developm	ent					
	Costs	\$4,901,992	\$0	\$863,181	\$0	\$0	\$0	\$0	\$0	\$0
Transfer M	laterial to Di	sposal Site (Pa	ge Creek) fro	om Transfer	Site (Chief Tir	nothy)				
	Costs			\$6,410,382	\$6,410,382	\$6,410,382	\$6,410,382	\$6,410,382	\$6,410,382	\$6,410,382
Mechanica	l Dredging, Costs	ef Timothy River to Transi								
Mechanica	l Dredging, Costs	River to Trans			01. (01. 47.					
Mechanica	l Dredging, Costs	The second secon			Site (Chief Tir	mothy)	0	0	0	
Mechanica	Il Dredging, Costs laterial to Di	River to Transi sposal Site (Pa			Site (Chief Tii		0	0	0	C
Mechanica	Il Dredging, Costs laterial to Di	River to Transi sposal Site (Pa			Site (Chief Ti		0	0	- 111	c sc
Mechanica Transfer M	I Dredging, Costs laterial to Di Costs	River to Transi sposal Site (Pa \$0	ige Creek) fr 0	om Transfer 0	0	0			- 111	
Mechanica	I Dredging, Costs laterial to Di Costs on Subtotal	River to Transi sposal Site (Pa \$0 \$0	nge Creek) fr 0 \$0 \$0	om Transfer 0 0 \$0 \$863,181	0 \$0 \$0	0 \$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0
Mechanica Transfer M Constructio	I Dredging, Costs laterial to Di Costs on Subtotal	River to Transi sposal Site (Pa \$0 \$0 \$4,901,992	nge Creek) fr 0 \$0 \$0	om Transfer 0 0 \$0 \$863,181	0 \$0 \$0	0 \$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0
Mechanica Fransfer M Constructio	I Dredging, Costs laterial to Di Costs on Subtotal	River to Transi sposal Site (Pa \$0 \$0 \$4,901,992 \$3,895,990	nge Creek) fr 0 \$0 \$0	om Transfer 0 0 \$0 \$863,181	0 \$0 \$0	0 \$0 \$0 \$10,306,372	\$0 \$0 \$10,306,372	\$0 \$0	\$0 \$0 \$10,306,372	\$0
Mechanica Transfer M Constructio	I Dredging, Costs laterial to Di Costs on Subtotal	River to Transi sposal Site (Pa \$0 \$0 \$4,901,992 \$3,895,990 0	so \$0 \$0 \$3,895,990 \$0	om Transfer 0 \$0 \$863,181 \$10,306,372 \$0	0 \$0 \$0 \$10,306,372 \$0	0 \$0 \$0 \$10,306,372 \$0	\$0 \$0 \$10,306,372 \$0	\$0 \$0 \$10,306,372 \$0	\$0 \$0 \$10,306,372	\$0 \$0 \$10,306,372 \$0

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
										!
										\$3,895,990
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,410,382
\$1,818,68	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	
\$3,917,55	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	0
\$	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
\$5,736,24	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240 \$0	\$5,736,240 \$0	\$5,736,240 \$0	\$5,736,240	\$5,736,240 \$0	\$5,736,240 \$0	\$10,306,372
\$5,736,24	\$5,736,240	\$5,736,240	\$0 \$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$10,306,372
FY2	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY32	FY31	FY30	FY29	FY28	FY27	FY26	FY25	FY24	FY23	FY22	FY21
\$6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,818,68	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,618,682	\$1,818,682	\$1,818,682	\$1,818,682
\$3,917,55	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558
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FY3	FY31	FY30	FY29	FY28	FY27	FY26	FY25	FY24	FY23	FY22	FY21

FY44	FY43	FY42	FY41	FY40	FY39	FY38	FY37	FY36	FY35	FY34	FY33
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,818,68	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	1,818,682
\$3,917,55	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	3,917,558
\$ \$5,736,24	\$0 \$0 \$5,736,240	\$0 \$0 5,736,240									
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\$5,736,24	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	5,736,240
FY4	FY43	FY42	FY41	FY40	FY39	FY38	FY37	FY36	FY35	FY34	FY33

FY56	FY55	FY54	FY53	FY52	FY51	FY50	FY49	FY48	FY47	FY46	FY45
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682
\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	3,917,558
\$0 \$0 \$5,736,240											
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240
FY56	FY55	FY54	FY53	FY52	FY51	FY50	FY49	FY48	FY47	FY46	FY45

FY68	FY67	FY66	FY65	FY64	FY63	FY62	FY61	FY60	FY59	FY58	FY57
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682
\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	3,917,558
\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240
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FY68	FY67	FY66	FY65	FY64	FY63	FY62	FY61	FY60	FY59	FY58	FY57

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69	
\$0							
\$38,959,900 \$5,765,173							
\$51,283,056	\$0	\$0	\$0	\$0	\$0	\$0	
\$116,395,648	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	\$1,818,682	
\$250,723,712	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	\$3,917,558	
\$5,765,173 \$457,362,316	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5 736 240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	\$0 \$0 \$5,736,240	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$463,127,489	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	\$5,736,240	
74 Years	FY74	FY73	FY72	FY71	FY70	FY69	

Upland 2.a.b.c.d

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DEMUIN: Dredging 1-M CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT

TIME 11:39:02

TITLE PAGE 1

Dredging 1-M CuY Confl. Upland D DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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LABOR ID: NAT99A EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Project Description: The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Fage Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the MICRO Computer Alded Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEEEP)

Overtime: Owertime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 bolidays.

Construction Windows: Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during years one and two.

Sub Contracting Plan: No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access: It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Nethodology: Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station and the Disposal area will be constructed during the first two years. The first two years dredging material will be used for development of the Transfer Station. After year two the dredging material will be offloaded from the barges on to the Transfer Station site where the material will be allowed to deveter. The material may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

Conditions: This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal

winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Houth of the Columbia Mom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DYNULM: Dredging 1-M CuY Confl. Upland D - DWMS Dredging PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT

TIME 11:39:02

TITLE PAGE 3

River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than the dredging plant rates were computed based on the EP 110-1-5. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies

Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEMBURY: Dredging 1-M CuY Confl. Upland D - DEMS Dredging PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

TIME 11:39:02

	QUANTITY UON	TOTAL DIRECT	POOR	HOOM	PROF	lisc Ta	BOND	TOTAL COST	UNIT COS
01 SNAKE RIVER DMMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 дв	275,294	27,529	15,141	27,822	0	3,467	349,254	349253
TOTAL MOB. & DEMOB. AND PREMORE	1.00 JB	275,294	27,529	15,141	27,822	0	3,467	349,254	349253.
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.00202BB Dredging & Haul Mat to Disposal 01.12.06.01.00202EB Offloading Barge, with Clamshell 01.12.06.01.00202EF Push Mat to Dry Area, by Dozer	1000000 CY 1000000 CY	1,860,000 688,205 247,455	186,000 68,821 24,746	102.300 37,851 13,610	187,976 69,552	0	23,427 8,668	2,359,704 873,097	2 0
TOTAL DREEKE, HAUL & OFF-LOAD MATERIAL		2,795,660	279,566	153,761	25,008	0	35,212	313,936	
TOTAL MECH DREDGING, RIVER TO TRANSFER		3,070,954	307,053	168,902	310,358	0	38,680	3,895,990	3
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- MAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AC Load, Haul, Spread in Disposal S	1000000 BCY	4,841,561	726,234	278,390	453,079	0	56,240	6,355,505	6
TOTAL HAUL MAT. TO DISPOSAL SITE	1000000 CY	4,841,561	726,234	278,390	453,079	0	56,240	6.355.505	6
01.12.06.02.002- RESTORATION OF SITES									
01.12.06.02.00202AA Upland Site, Hydro Seeding 01.12.06.02.00202AC Upland Site, Top Soil, L,H,S 01.12.06.02.00202BA Transfer Site, Mydro Seeding 01.12.06.02.00202BC Transfer Site, Top Soil, L,H,S	5.00 AC 4000.00 BCY 5.00 AC 4000.00 BCY	9,500 11,402 9,500 11,402	1,425 1,710 1,425 1,710	546 656 546 656	889 1,067 889 1,067	0 0 0	110 132 110 132	12,471 14,968 12,471 14,968	2494
TOTAL RESTORATION OF SITES	10.00 AC	41,805	6,271	2,404	3,912	0	486	54,877	5487
TOTAL TRANSFER MATERIAL TO DISPOSAL	1000000 CY	4,883,366	732,505	280,794	456,992	0	56,726	6,410,382	
01.12.06.03 DISPOSAL/TRANSPER DEV. CHIEF TIM									
01.12.06.03.001- TRANS, RIVER DIKE 6 SP BARGE SLIP									

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMUIN: Dredging 1-H CuY Confi. Upland D - DROSS Dredging PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:19:02

		NOU YTTTHADQ	TOTAL DIRECT	FOOH	HOOR	PROF 8	disc Ta	BOND	TOTAL COST	UNIT COST
			270.530.000	1001000						
	T-RS Berm. Barth Fill, L.H.D.&C	40000.00 BCY	193,105	28,966	11,104	20,403	0	2,411	255,988	6,40
	T-RS Barge Tie-off, Sheet Piling	52000.00 SF	1,006.485	150,973	57,873	106,341	0	12,566	1.334,239	25.66
	T-RS Barge Tie-off, (Mood pole)	576.00 LP	22,883	3,432	1.316	2,418	0	286	30,334	52.66
01.12.06.03.00103AB	T-Barge Tie-off, Piling Anchr-Blk	780.00 CY	167,151	25,073	9,611	17,661	0	2,087	221,583	284.08
TOTAL	TRANS, RIVER DIKE & SP BARGE SLIP	2600.00 LP	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
01.12.06.03.002- TRANS	FER DIKES, (LAND SIDE)									
01.12.06.03.00202AA	T-Berm, Earth Fill, L.H.D.&C	56260.00 BCY	272,548	40,882	15,672	28,796	0	3,403	361,301	6.42
01.12.06.03.00202RA	T-Berm, Earth Fill, Geotextile	12250.00 SY	36,517	5,478	2,100	3,858	0	456	48,408	3.95
01.12.06.03.00202KK	T-Berm, Fence Galv.	5300.00 LF	39,201	5,880	2,254	4,142	0	489	51,967	9.81
01.12.06.03.00202RK	T-Berm, R-Prot, RipRap Beddg, 6"Thk	520.00 CY	6,780	1.017	390	716	0	85	8,987	17.28
	T-Berm, R-Prot, RipRap Rock 2'Thk	2075.00 CY	76,339	11.451	4,390	8,066	0	953	101,198	48.77
	T-Berm, Seeding Earth Fill	2.50 ACR	4,750	713	273	502	0	59	6,297	2518.72
TOTAL	TRANSFER DIKES, (LAND SIDE)	5150.00 LF	436,135	65,420	25,078	46,080	0	5,445	578,159	112.26
01.12.06.03.003- TRANS	S.SETTLEMENTATION PONDS, 4 EA									
01.12.06.03.00302AA	T-Bern, Earth Fill, Settling Pond	2800.00 BCY	13,265	1,990	763	1,402	0	166	17,584	6,28
		26000.00 BCY	126,826	19,024	7.293	13,400	0	1,583	168,126	
01.12.06.03.00303AA	T-Berm, S&D Fond, OverflowConc Str	8.00 EA	50.724	7,609	2,917	5,359	0	633	67,242	
01.12.06.03.00303MA	T-Berm, S&D Pond, Pump Col ConcStr	4.00 EA	20,989	3,148	1,207	2,218	0	262	27,824	
01.12.06.03.00303OA	T-Berm, S&D Pond, Pumps Pads	4.00 MA	19,883	2,982	1,143	2,101	0	248	26,358	
TOTAL	TRANS, SETTLEMENTATION PONDS, 4 EA	1.00 SF	231,687	34,753	13,322	24,479	0	2,893	307,134	307134.05
01.12.06.03.004- TRANS	G(BRIDGE)CRANE RAIL,UNL BARG									
01.12.06.03.00402BA	T-BCR Set &Drive H-12x84 Columns	8400.00 LF	256,245	38,437	14,734	27,074	0	3.199	339,689	40.44
01.12.06.03.00403AA	T-BCR Elevated Concrete Beams	1640.00 CY	675,293	101,294	38,829	71.349	0	8,431	895,196	
01.12.06.03.00405AA	T-BCR Crane Rails -Bridge Crane	4200.00 LF	140,877	21,121	8,100	14,884	0	1,759	186,752	
	Purchased Crane Cost in Eq Rates	2.00 EA	0	0	0	0	0	0	0	
TOTAL	TRANS(BRIDGE) CRANE RAIL, UNL BARG	2100.00 LF	1,072,414	160,862	61,664	113,307	0	13,389	1,421,637	676.97
01.12.06.03.005- BRID	GE FOR HIGHWAY CROSSING									
01 12 06 01 005 0222	Ramps, Earthern Fill, L.H.D.&C	10000 00 000		7 22 2 2 2	200.00	1273000	25	100000		
	Ramps, Earthern Fill, Prep	18600.00 BCY	88,972	13,346	5,116	9,401	0	1,111	117,946	
		560.00 BCY	1,253	188	72	132	0	16	1,661	
	Ramps, Compt Gravel Fill, 6° Thk	560.00 CY	7,301	1,095	420	771	0	91	9,679	
01.12.00.03.00503KP	Bridge & Abuts, Concr 30°W 46°L	1260.00 SF	126,000	18,900	7,245	13,313	0	1,573	167,031	
TOTAL	BRIDGE FOR HIGHMAY CROSSING	1050.00 LF	223,526	33,529	12,853	23,617	0	2,791	296,316	

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DENUIM: Dredging 1-H CuY Confl. Upland D - DRMS Dredging PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

TIME 11:39:02

		QUANTITY UOM	TOTAL DIRECT	POOH	ноон	PROF M	isc Ta	BOND	TOTAL COST	MIT COS
01.12.06.03.006- UPLAN	ND DISPOSAL HAUL KOAD									
01.12.06.03.00602AA	Access Road, Clear & Grub	10.00 ACR	12,788	1,918	735	1,351	0	160	16,952	1695.2
	Access Road, Cut & Fill - L.H.S	75000.00 BCY	198,747	29,812	11,428	20,999	0	2.481	263,468	3.5
01.12.06.03.00602AE	Access Road, Earthern Fill, Prep	3100.00 BCY	6,935	1,040	399	733	0	87	9,193	2.
01.12.06.03.00602BB	Access Road, Gravel Fill, 6"Thk	3100.00 CY	40,417	6,063	2,324	4,270	0	505	53,578	17.
01.12.06.03.00602EA	Access Road, Culvert 18°Dia 10Ea	500.00 LF	11.324	1,699	651	1,197	0	141	15,012	30.
01.12.06.03.0060280	Access Road, Ditches	7700.00 LF	14,214	2.132	817	1,502	0	177	18,843	2.
01.12.06.03.00602TA	Access Road, Seeding	5.00 ACR	9,500	1,425	546	1,004	0	119	12,594	2518.
TOTAL.	UPLAND DISPOSAL HAUL ROAD	7000.00 LF	293,925	44.089	16,901	31.055	0	3,670	389,640	
101110	OFFINE STOPOSE SHOE NOW	7000.00 LF	273,723	44,007	10, 501	31,055		3,670	389,640	55
01.12.06.03.007- UPLA	ND DISPOSAL SITE DEVELOPMENT									
01.12.06.03.00702AA	D-Containment Berm, Dike	2700.00 CY	6,864	1,030	395	725	0	86	9,099	3.
01.12.06.03.007- 02BA	D-Containment Berm, Geotextile	6800.00 SY	20,271	3,041	1,166	2,142	0	253	26,872	3
01.12.06.03.00702EA	D-Containment Berm, Culvert12'Dia	280.00 LF	4,762	714	274	503	0	59	6,313	22
01.12.06.03.0070280	D-Containment Berm, Culvert18 Dia	500.00 LF	11,324	1.699	651	1,197	0	141	15,012	30
01.12.06.03.00702SA	D-Containment Berm, Top Soil	1000.00 CY	2.542	381	146	269	0	32	3,370	- 3
01.12.06.03.00702TA	D-Containment Berm, Seeding	2.50 ACR	4,750	713	273	502	0	59	6,297	2518.
TOTAL	UPLAND DISPOSAL SITE DEVELOPMENT	2000000 CY	50,513	7,577	2,905	5,337	0	631	66,963	0.
TOTAL	DISPOSAL/TRANSPER DEV, CHIEF TIM	1000000 CY	3,697,826	554,674	212,625	390,698	0	46,169	4,901,992	4 .
01.12.06.99 DISPOSAL/	TRANSFER CAP, CHIEF TIM									
01.12.06.99.001- RCC	COMPACTED CONCRETE CAP									
01.12.06.99.00102AB	RCC Prep, Grade and Compact Site	272997.00 SF	18,073	2,711	1,039	1,910	0	335	24.068	0
01.12.06.99.0010288	RCC Compacted Gravel Fill, 6"Thk	5056.00 CY	65,924	9,889	3.791	6,965	0	1,222	87,790	17
01.12.06.99.0010388	RCC Compacted Concrete, 1' Thick	10111.00 CY	564,189	84,628	32,441	59,610	0	10,455	751,323	74
TOTAL	RCC COMPACTED CONCRETE CAP	10111.00 CY	648,186	97,228	37,271	68,485	0	12,012	863,181	85
TOTAL	DISPOSAL/TRANSFER CAP, CHIEF TIM	272997.00 SP	648,186	97,228	37,271	68,485	0	12,012	863,181	3
TOTAL	DREDGING RIVERS	1000000 CY	12,300,332			1,226,533	0	153,586	16,071,544	16
TOTAL	NAVIGATION, PORTS & HARBORS		12,300,332			1,226,533	0		16,071,544	
TOTAL	SNAKE RIVER DOMS 99		12,300,332	1,691,502	699,592	1,226,533	0		16,071,544	
	Dredging 1-N CuY Confl. Upland D			*******	699,592	ARTERDACE.	CHARLES.	*******		

Mom 14 Aug 2000 Eff. Date 05/01/99 ERMOR REPORT

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMUIM: Dredging 1-M CuV Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 1,000,000 CV OF DREDGE MAT

TIME 11:39:02

ERROR PAGE 1

No errors detected ...

· · · END OF ERROR REPORT · · ·

Mom 14 Aug 2000 Sfr. Date 05/01/99 TABLE OF CONTENTS

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMUIM: Dredging 1-M CuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 1,000,000 CY OF DREDGE MAT

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SUMMARY REPORTS

SUMMARY PAGE

No Detailed Estimate...

No Backup Reports...

· · · END TABLE OF CONTENTS · · ·

Upland 2.e

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMGUD4: Dredging J25tCuY Confl. Upland D - DMGS Dredging
PLANNING ESTIMATE - J25,000 CY OF DREDGE MAT

TIME 11:42:36 TITLE PAGE 1

......

Dredging 325tCuY Confl. Upland D DBMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 111 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Hile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

#### Basis of Design

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

#### Connet iron

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Oredging operations will begin on 15 December, and shall not continue after 28 Peb, in any given year, due to the fish window requirements.

### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology:

Common dredging methods using 15cy clamahell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater, the material may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Non 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMU04: Dredging 325tcuY Confl. Upland D - DMMS Dredging PLANNING ESTINATE - 325,000 CY OF DREDGE MAT

TIME 11:42:36

TITLE PAGE 3

Mobilization will be from the Nouth of the Columbia River to the Confluence of the Smake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. all equipment other than dredging plant rates were computed based on the EP 110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

### Contingencies:

Total costs include Overhead and Profit. Escalation and contingencies are not included.

#### Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mom 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DM99U04: Dredging 325tCuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 125.000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:42:36 SUMMARY PAGE 1

	QUANTITY UOM		РООН	HOON	PROF MS	sc Ta	BOND	TOTAL COST (	MIT COST
01 SNAKE RIVER DWHS 99									
01.12 NAVIGATION, PORTS & MARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREMORK									
01.12.06.01.00101AA Mob. & Demob. Excavation D	redges 1.00 JB	249,956	24,996	13,748	25,261	0	3.751	317,711	117711.39
TOTAL HOB. & DEMOB. AND PREMORE	1.00 Jm	249,956	24,996	13,748	25,261	0	3,751	317,711	317711.39
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIA	L								
01.12.06.01.0020288 Dredging & Haul Mat to Dis 01.12.06.01.0020288 Officading Barge, with Cla 01.12.06.01.002028P Push Mat to Dry Area, by D	mshell 325000.00 CY	861,250 235,133 84,489	86.125 23,513 8,449	47,369 12,932 4,647	87,040 23,763 8,539	0 0	12,925 3,529 1,268	1,094,708 298,870 107,392	3.37 0.92 0.33
TOTAL DREDGE, HAUL & OFF-LOAD MA	TERIAL 325000.00 CY	1,180,872	118.087	64,948	119,342	0	17,721	1,500,970	4.62
TOTAL MECH DREDGING, RIVER TO TR	ANSFER 325000.00 CY	1,430,828	143,083	78,696	144,603	0	21,472	1,818,682	5.60
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AC Load, Haul, Spread in Disp	osal S 325000.00 BCY	1,574,721	236,208	90,546	147,364	0	23,945	2,072,785	6.38
TOTAL HAUL MAT. TO DISPOSAL SITE	325000.00 CY	1,574,721	236,208	90,546	147,364	D	23,945	2,072,785	6.38
01.12.06.02.002- RESTORATION OF SITES									
01.12.06.02.00202AA Upland Site, Hydro Seeding 01.12.06.02.00202AC Upland Site, Top Soil, L,N 01.12.06.02.00202BA Transfer Site, Hydro Seed 01.12.06.02.00202BC Transfer Site, Top Soil, L	r, S 2167.00 BCY ng 2.50 AC	4,750 5,161 4,750 5,161	774 713 774	273 297 273 297	445 483 445 483	0 0 0	72 78 72 78	6,252 6,793 6,252 6,793	2500.95 3.13 2500.95 3.13
TOTAL RESTORATION OF SITES	5.00 AC	19,822	2,973	1,140	1,855	0	301	26,091	5218.19
TOTAL TRANSFER MATERIAL TO DISPO	SAL 325000.00 CY	1,594,543	239,181	91,686	149,219	0	24,246	2,098,876	6.46
TOTAL DREDGING RIVERS	325000.00 CY	3,025,371		170,382	293,822	0	45,718	3,917,558	12.05
TOTAL NAVIGATION, PORTS & HARBOS	RS	3,025,371	382,264	170,382	293,822	0	45,718	3,917,558	

Mom 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DEMUD4: Dredging 325tCuY Confl. Upland D - DHMS Dredging
PLANNING ESTIMATE - 125,000 CV OF DREDGE MAT
\*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

SUMMARY PAGE 2

TIME 11:42:36

SUPPLANT PAGE

QUAN	MOU ALLA	TOTAL DIRECT	POOH	ноон	PROF H	tiac Ta	BOND	TOTAL COST UNIT COST
TOTAL SNAKE RIVER DMMS 99		3.025,371	382,264	170,382	293,822	0	45,718	3,917,558
TOTAL Dredging 325tCuY Confl. Upland D		3,025,371	382,264	170,382	293,822	0	45,718	3,917,558

Mom 14 Aug 2000 Eff. Date 05/01/99 ERMOR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMU04: Dredging 125tCuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - J25,000 CY OF DREDGE MAT

TIME 11:42:36 ERROR PAGE 1

No errors detected...

· · · END OF ERROR REPORT · · ·

Mon 14 Aug 2000 Eff. Date 05/01/99 TABLE OF CONTENTS

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT EMONUM 1 Dredging 325tCuY Confl. Upland D - DRMS Dredging PLANNING ESTIMATE - 325.000 CY OF DREDGE MAT

CONTENTS PAGE 1

TIME 11:42:36

A TOTAL TOTA

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SUMMARY REPORTS

SUMMARY PAGE

No Detailed Estimate...

No Backup Reports...

. . . END TABLE OF CONTENTS . . .

**Upland 3 Proration** 

Cos Disposal (Joso) Cos Transfer Materia Cos  300,000 cy @ Mechanical Dre Cos Transfer (Chief Cos Transfer Materia	dging, F sts ) Site De sts al to Dis	River to Trans \$2,884,594 evelopment \$4,913,439 sposal Site (Jo	\$2,884,594 \$0	\$2,884,594	\$2,884,594	\$2,884,594				
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Cos 300,000 cy @ Mechanical Dre Cos Transfer (Chief Cos Transfer Materia Cos	sts		(50)					-		•••
Mechanical Dre Cos Transfer (Chief Cos Transfer Materia Cos	CHIE		\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360
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	al to Dis	sposal Site (Pa	age Creek) fro	om Transfer S	Site (Chief Tir	nothy)				1
Develop Page C	sts			\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Creek Up	pland Disposa	I Site							
Cos	sts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Construction Sub	btotal	\$4,913,439	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O,M,R,R,R Subt	total	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954
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W.	ars	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594	\$2,884,594
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360	\$1,939,360
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\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954	\$4,823,954
FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY3.	FY31	FY30	FY29	FY28	FY27	FY26	FY25	FY24	FY23	FY22	FY21
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				\$863,181							\$4,149,074
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FY3	FY31	FY30	FY29	FY28	FY27	FY26	FY25	FY24	FY23	FY22	FY21

FY44	FY43	FY42	FY41	FY40	FY39	FY38	FY37	FY36	FY35	FY34	FY33
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\$1,681,35	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357
\$1,934,73	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734
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FY4	FY43	FY42	FY41	FY40	FY39	FY38	FY37	FY36	FY35	FY34	FY33

FY56	FY55	FY54	FY53	FY52	FY51	FY50	FY49	FY48	FY47	FY46	FY45
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\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357
\$1,934,73	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734
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FY50	FY55	FY54	FY53	FY52	FY51	FY50	FY49	FY48	FY47	FY46	FY45

FY68	FY67	FY66	FY65	FY64	FY63	FY62	FY61	FY60	FY59	FY58	FY57
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\$1,934,73	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734
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	\$3,616,091	The second secon						100000	\$3,616,091	\$3,616,091	\$3,616,091
FY6	FY67	FY66	FY65	FY64	FY63	FY62	FY61	FY60	FY59	FY58	FY57

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
\$0						
\$57,691,880	\$0	\$0	\$0	\$0	\$0	\$0
\$4,913,439	\$0	\$0	\$0	\$0	\$0	\$0
\$38,787,200	\$0	\$0	\$0	\$0	\$0	\$0
\$90,793,278	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681,357	\$1,681.357
\$5,012,255						
\$90,932,498	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734	\$1,934,734
\$752,919	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$10,678,613	\$0	\$0	\$0	\$0	\$0	\$0
\$278,204,856	100000	2000000	10.00	\$3,616,091	1 1,7000	1000
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$288,883,469	\$3,616,091	\$3,616,091	\$3,616,091	\$3,616,091	\$3,616,091	\$3,616,091
74 Years	FY74	FY73	FY72	FY71	FY70	FY69

Upland 3.a.b

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMS3T: Dredging 3hT CuY Cont1.Upland#29 - DMMS Dredging
PLANNING ESTIMATE - 100,000 CY OF DREDGE MAT

TIME 11:50:34

TITLE PAGE 1

Dredging 3hT CuY Confl.Upland#29 DWMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

M C A C E S F O R M I N D O M S Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c

LABOR ID: NAT99A EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPS ID: UP99EA

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Hile 111 upstream to the State Righway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Hile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Hile 1.66. All material assumed to be disposed of utilizing a Disposal Area at Joso near river mile 5.6. The Disposal Area is assumed adequate to contain all materials dredged.

#### Basis of Design:

Filanning level estimate produced utilizing MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Peb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offlaoded from the barges on to the Disposal Area.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clanshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment
Mobilization will be from the Nouth of the Columbia River to the Confluence
of the Snake and Clearwater Rivers, approximately 463 River Miles to allow
contractors from Portland & Seattle to compete. All equipment is considered
owned - no rental equipment considered. All equipment other than dredging

Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DROKS3T: Dredging 3hT CuY Confl.Upland#29 - DRMS Dredging PLANNING ESTIMATE - 300,000 CY OF DREDGE MAT

TIME 11:50:34

TITLE PAGE 3

plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:

Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:

Labor: General Decision Number WA990001, Medification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Mistorical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMS3T: Dredging 3hT CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 300.000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:50:34

SUMMARY PAGE 1

 ***************************************	QUANTITY UCH	TOTAL DIRECT	FOOM	HOOH	PROF Mi	sc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMNS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
02.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	249,305	24,931	13,712	25,195	0	3.419	316,561	316561.22
TOTAL MOB. & DEMOB. AND PREMORK	1.00 JB	249,305	24,931	13.712	25,195	0	3,419	********	316561.22
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.00202BB Dredging & Haul Mat to Transfer 01.12.06.01.00202EB Off Loading Barge, W/Clamshell	300000.00 CY 300000.00 CY	1,488,000 534,431	148,800 53,443	81.840 29,394	150,381 54,011	0	20,404 7,328	1,889,425 678,607	
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	300000.00 CY	2,022,431	202,243	111,234	204,392	0	27,732	2,568,032	8.50
TOTAL MECH DREDGING, RIVER TO TRANSFER	300000.00 CY	2,271,736	227,174	124,945	229,587	0	31,151	2,884,594	
01.12.06.02 TRANSFER NATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AA Load, Haul, Dump & Compact D-Mat	300000.00 BCY	1,321,381	198,207	182,351	170.194	0	22,140	1,894,273	6.31
TOTAL HAUL MAT. TO DISPOSAL SITE	300000.00 CY	1,321,381	198,207	182,351	170,194	0	22,140	1,894,273	
01.12.06.02.002- RESTORATION-TRANSPER/DISPL SITES									
01.12.06.02.00202AA Transfer Site, Hydro Seeding	2.00 AC	6,000	900	828	773	0	101	8,601	4300.63
01.12.06.02.00202BA Load, Haul, Dump &Compact T-Soil 01.12.06.02.00202KA Disposal Site, Hydro Seeding	2000.00 BCY 2.00 AC	9,726	1,459	1,342	1,253	0	163	13,942	
01.12.06.02.00202KB Load, Haul, Dump &Compact T-Soil		6,000 9,726	900 1,459	828 1,342	773 1,253	0	101 163	8,601 13,942	
TOTAL RESTORATION-TRANSFER/DISPL SITES	4.00 AC	31,452	4,718	4,340	4,051	0	527	45,088	11271.91
TOTAL TRANSFER MATERIAL TO DISPOSAL	300000.00 CY	1,352,833	202,925	186,691	174,245	0	22,667	1,939,360	

01.12.06.03 DISPOSAL/TRANSPER DEVELOMENT #29

01.12.06.03.001- RIVER SIDE DIKE & WE BARGE SLIP

Mon 14 Aug 2000 EEE. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DHMS37: Dredging JhT CuY Confl.Upland#29 - DeMS Dredging PLANNING ESTIMATE - 300,000 CY OF DREDGE MAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:50:34 SUMMARY PAGE 2

 		QUANTITY UOM	TOTAL DIRECT	POOH	HOOH	PROF M		BOND	TOTAL COST (	NIT COST
01.12.06.03.00102AA	RS Berm, Earthern Fill, L.H.D.&C	5000.00 BCY	24,600	3,690	1,414	2,599	.0	307	32,610	6:52
01.12.06.03.00102AB	RS Barge Tie-off, Sheet Piling	70000.00 SF	1,354,884	203,233	77,906	143,152	0	16,908	1,796,082	25.66
01.12.06.03.00102D8	RS Barge Tie-off, (Wood pole) 509c	380.00 LF	15,096	2,264	868	1,595	0	188	20,012	52.66
01.12.06.03.00102KB	RS Exc ULoading Area, W/Clamshell	38890.00 CY	46,796	7,019	2,691	4,944	0	584	62,034	1.60
01.12.06.03.00103AB	Barge Tie-off, Piling Anchr-Block	525.00 CY	113,039	16,956	6,500	11,943	0	1.411	149,849	285.43
TOTAL	RIVER SIDE DIKE & WE BARGE SLIP	1750.00 LF	1,554,415		89,379	164,234	0	19,398	2,060,587	1177.48
01.12.06.03.002- RIVE	R SIDE DIKE & EE BARGE SLIP									
01.12.06.03.00202AA	RS Berm, Earthern Fill, L.H.D.&C	5000.00 BCY	24,600	3,690	1,414	2,599	0	307	32,610	6.52
01.12.06.03.00202AB	RS Barge Tie-off, Sheet Piling	70000.00 SF	1,354,884	203,233	77,906	143, 152	0	16,908	1,796,082	25.66
01.12.06.03.0020208	RS Barge Tie-off, (Wood pole) 509c	380.00 LP	15,096	2,264	868	1,595	0	188	20,012	52.66
01.12.06.03.00202KB	RS Exc Uloading Area, W/Clamshell	38890.00 CY	46,796	7,019	2,691	4,944	0	584	62,034	1.60
01.12.06.03.00203A8	Barge Tie-off, Filing Anchr-Block	525.00 CY	113,039	16,956	6,500	11,943	0	1.411	149,849	285.43
TOTAL	RIVER SIDE DIKE & BE BARGE SLIP	1750.00 LP	1,554,415	233,162	89,379	164,234	0	19,398	2,060,587	1177.48
01.12.06.03.003- TRAK	SFER SITE (WEST END) DIKES									
01.12.06.03.003A02A	TRANS Containment Berm, Dike Exc	200.00 CY	508	.76	29	54	0		674	3.37
	TRANSContainment Bern, Geotextile	820.00 SY	2,444	367	141	258	.0	31	3,240	3.95
	TRANS Containment Berm, Top Soil	270.00 CY	686	103	39	7.3	0	9	910	3.37
	TRANS Containment Berm, Seeding	1.00 ACR	3,500	525	201	370	0	4.4	4,640	4639.72
	TRANS Settling Pond, Dike	420.00 CY	1,068	160	61	113	0	13	1,415	3.37
	TRANS Detention Pond, Dike	230.00 CY	585	8.8	34	62	0	7	775	3.37
	TRANS Fence Galv. Posts in Earth	2000.00 LP	16,308	2,446	938	1,723	0	204	21,619	10.81
01.12.06.03.003D03A	TRANS Overflow Strs between Pond	2.00 EA	6,249	937	359	660	0	78	8,285	4142,25
TOTAL	. TRANSFER SITE (WEST END) DIKES	5150.00 LF	31.349	4,702	1,803	3,312	0	391	41,558	8.07
01.12.06.03.004- TRAP	SPER SITE (EAST END) DIKES									
	TRANS Containment Berm, Dike Exc	200.00 CY	508	76	29	54	0	- 6	674	3.37
	TRANSContainment Berm. Geotextile	820.00 SY	2,444	367	141	258	0	31	3,240	3.95
	TRANS Containment Berm, Top Soil	270.00 CY	686	103	39	73	0		910	3.37
	TRANS Containment Berm, Seeding	1.00 ACR			201	370	0	4.4	4,640	4639.72
	TRANS Settling Pond, Dike	420.00 CY	1,068	160	61	113	0	13	1,415	3.37
	TRANS Detention Pond, Dike	230.00 CY	585		34	62	0	7	775	3.37
	TRANS Pence Galv, Posts in Earth		16,308			1,723	0	204	21,619	10.81
01.12.06.03.004D03A	TRANS Overflow Strs between Pond	2.00 EA	6,249	937	359	660	0	78	8,285	4142.29
TOTAL	L TRANSFER SITE (EAST END) DIKES	5150.00 LF	31,349		1,803	3,312	0	391	41,558	8.07

01.12.06.03.005- ACCESS ROADS & HAUL ROAD

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMS37: Bredging 3hT Cuy Confl.Upland#29 - DeMS Dredging PLANNING ESTIMATE - 300,000 Cy of DREDGE MAT \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

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TIME 11:50:34

		QUANTITY UOM	TOTAL DIRECT	FOOH	ноон	PROF M	isc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.005	DZAA Access Road, Clear, Grub & Shape	7500.00 LF	26,753	4,013	1,538	2,827	0	314	35,464	4.73
	TOTAL ACCESS ROADS & HAUL ROAD	1.00 EA	26,753	4,013	1,538	2,827	0	334	35,464	35464.06
01.12.06.03.006-	DISPOSAL SITE DIKES									
	MOZA DISP Containment Berm, Dike Bxc	6700.00 CY	17,633	2,555	979	1,800	0	213	22,579	3.37
	A02B DISP Containment Berm, Geotextile		459,071	68,861	26, 197	48,504	0	5,729	608,561	3.95
	A02S DISP Containment Berm, Top Soil A02T DISP Containment Berm, Seeding	2480.00 CY 4.00 ACR	6,305 14,000	946 2,100	363 805	1,479	0	175	8,358 18,559	3.37
	802A DISP Settling Pond, Dike	840.00 CY	2,135	320	121	226	0	27	2,831	4639.72
	CO2A DISP Detention Fond, Dike	460.00 CY	1,169	175	67	124	0	15	1,550	3.37
	003A DISP Overflow Strs between Ponds		8,484	1,273	488	896	0	106	11,247	5623.64
									********	
	TOTAL DISPOSAL SITE DIKES	7000.00 LF	508,198	76,230	29,221	53.694	0	6,342	673,685	96.24
					********					
	TOTAL DISPOSAL/TRANSFER DEVELOMENT #29	300000.00 CY	3,706,478	555,972	213,122	391,613	0	46,254	4,913,439	16.38

Non 14 Aug 2000 Ef: Date 05/01/99 ERROR REPORT

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMS37: Dredging JhT CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 300,000 CY OF DREDGE HAT

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No errors detected...

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## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEMSJT: Dredging 3hT CuY Confl.Upland#29 - DEMS Dredging PLANMING ESTIMATE - 100,000 CY OF DREDGE MAT

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Appendix B Cost Estimates Upland 3.c.d.e.f

Hom 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMU03: Dredging 3hT CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 300,000 CY DREDGE MATERIAL

TIME 11:44:56

TITLE PAGE 1

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Dredging 3hT CuY Confl. Upland D DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walls Walls District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

M CACES FOR WINDOWS Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c Project Description: The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Nile 139.5. The Clearwater

River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a Transfer Station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rebandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime: Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Mork shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Mindows: Dredging operations will begin on 15 December, and shall not continue after 28 Peb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during year the first 7 years.

Sub Contracting Plan: No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access: It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology: Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station will be constructed during the first year. The first seven years dredging material will be used for development of the Transfer Station. The Disposal Area wil be constructed during year seven. After year seven the dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the Disposal Area throughout the remainder of the year.

Conditions: This work will take place during winter months. The anticipated types of soil to be incountered are sand/rilts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Lobor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and

Mon 14 Aug 2000 Sff. Date 05/01/99 PROJECT NOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT EMBUGS: Dredging 3hT CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 100,000 CY DREEGE MATERIAL

TIME 11:44:56 TITLE PAGE 3

Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:

Total costs include Gverhead and Profit. Escalation and contingencies are not included.

Effective dates For: Labor: General Decision Number MA990001, Modification #1 dated 1/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Mistorical Dredging Equipment information. Mon 14 Aug 2000 Bif. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DM9803: Dredging 3hT CuY Confl. Upland D - DMMS Dredging PLANNING ESTIMATE - 300,000 CY DREDGE MATERIAL \*\* PROJECT INDIRECT SYMMARY - BID ITEM \*\*

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SUMMARY PAGE 1

 )	NOU YTITHAUG	TOTAL DIRECT	FOOH	ноон	PROF Mi	C Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DHMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREMORK 01.12.06.01.002- DREDGE, HAUL & OPP-LOAD MATERIAL 30		249,956 1,072,625	24,996 107,263	13,748 58,994	25,261 108,402	0	3,801 16,311	1,363,596	317761.43 4.55
TOTAL MECH DREDGING, RIVER TO TRANSFER 3	00000.00 CY	1,322,581	132,259	72,742	133,663	0	20,112	1,681,357	5.60
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
	00000.00 CY	1,451,712	217,757	83,473	135,853	0	22,345	1,911,141	6.37
01.12.05.02.002- RESTORATION OF SITES	4.00 AC	17,922	2,688	1,030	1,677	0	276	23,593	5898.33
TOTAL TRANSFER MATERIAL TO DISPOSAL 3	00000.00 CY	1,469,634	220,445		137,530	0		1,934,734	6.45
01.12.06.03 DISPOSAL/TRANSPER DEV, CHIEF TIM									
01.12.06.03.001- TRAMS, RIVER DIKE & SP BARGE SLIP	2600.00 LF	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
01.12.06.03.002- TRANSFER DIKES (LAND SIDE)	5150.00 LF	436,135	65,420	25,078	46,080	0	5,445	578, 159	112.26
01.12.06.03.003- TRANS, SETTLEMENTATION PONDS, 4 EA	1.00 SF	231,687	34,753	13,322	24,479	0	2,893	307,134	307134.05
01.12.06.03.004- TRANS(BRIDGE)CRANE RAIL, UNL BARG		1,072,414	160,862	61,664	113,307	0		1,421,637	676.97
01.12.06.03.005- BRIDGE FOR HIGHWAY CROSSING	1050.00 LF	223,526	33,529	12,853	23,617	0	2,791	296,316	
01.12.06.03.006- UPLAND DISPOSAL HAUL ROAD	7000.00 LF	293,925	44,089	16,901	31.055	0	3,670	389,640	
01.12.06.03.007- UPLAND DISPOSAL SITE DEVELOPMENT	2000000 CY	50,513	7,577	2,905	5,337	0	631	66,943	0.03
TOTAL DISPOSAL/TRANSFER DEV. CHIEF TIM 3	00000.00 CY	3,697,826	554,674	212,625	390,698	0	46,169	4,901,992	16.34
01.12.06.99 DISPOSAL/TRANSFER CAP, CHIEF TIM									
01-12.06.99.001- RCC COMPACTED CONCRETE CAP	10111.00 CY	648,186	97,228	37,271	68,485	0	12,012	863,181	
TOTAL DISPOSAL/TRANSFER CAP, CHIEF TIM 2	72997.00 SP	648,186	97,228	37,271	68,485	Ď	12,012	863,181	
TOTAL DREDGING RIVERS 3	00000.00 CY	7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	31.27
TOTAL HAVIGATION, PORTS & MARBORS		7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	
TOTAL SNAKE RIVER DMMS 99		7,138,226		407,142	730,377		100,914	9,381,264	
TOTAL Dredging 3hT CuY Confl. Upland D		7,138,226		402 142			100,914	9,381,264	

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PROJECT DEMUG3: Dredging 3hT CuY Confl. Upland D - DEMS Dredging
PLANNING ESTIMATE - 300,000 CY DREDGE MATERIAL

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## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEBUG): Dredging 3hT CuY Confl. Upland D - DEBS Dredging PLANMING ESTIMATE - 300,000 CY DREDGE MATERIAL

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SUMMARY REPORTS

SUMMARY PAGE

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Appendix B Cost Estimates **Upland 4 Proration** 

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
41,500 cy	@ Joso									
Mechanica	Dredging, Riv	ver to Transfer	Site (Joso)							
	Costs	\$0	\$0	\$0	\$0	\$673,429	\$0	\$0	\$0	\$0
Disposal (J	oso) Site Deve	elopment								
	Costs	\$0	\$0	\$0	\$0	\$2,198,955	\$0	\$0	\$0	\$0
Transfer M	aterial to Disp	osal Site (Jose	)							
	Costs	\$0	\$0	\$0	\$0	\$326,050	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Constructio	n Subtotal	\$0	\$0	\$0	\$0	\$2,198,955	\$0	\$0	\$0	\$0
O,M,R,R,R		\$0	\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	\$0
-,,		0	•	-	00	φυσυ, 47 σ	ΨΟ	90	90	φ.
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
Totals	\$0.00	\$0	\$0	\$0	\$0	\$3,198,434	\$0	\$0	\$0	\$0
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FYOS

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	fter FY10
\$673,42	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$673,429
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$326,05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$326,050
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
s	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$999,47	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$999,47	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479
FY2	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$673,429	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$326,050	\$0	\$0
\$0											
\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479	\$0	\$
FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3.

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$673,429	\$0	\$0	\$0	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	9
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	4
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	5
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
\$0	\$0	\$0	\$0	\$0	\$673,429	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$326,050	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	\$0	\$0	\$
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY5

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
\$0	\$0	\$0	\$673,429	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$326,050	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$(
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$(
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$999,479	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
\$0						
\$5,387,432	\$0	\$0	\$0	\$0	\$673,429	\$0
\$2,198,955	\$0	\$0	\$0	\$0	\$0	\$0
\$2,608,400	\$0	\$0	\$0	\$0	\$326,050	\$0
\$0						
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$2,198,955 \$7,995,832	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$999,479	\$0 \$0
\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
\$10,194,78	\$0	\$0	\$0	\$0	\$999,479	\$0
74 Years	FY74	FY73	FY72	FY71	FY70	FY69

Appendix B
Cost Estimates

Upland 4 a.b.c.d

TIME 11:52:10

TITLE PAGE 1

Dredging 50T CuY Confl.Upland#29 DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walls Walls District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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TIME 11:52:10

TITLE PAGE

#### Project Description:

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Riverz, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a Disposal Area at Joso near river mile 56. The Disposal Area is assumed adequate to contain all material dredged.

#### Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating, Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

#### Overtime:

Overtime is anticipated. The Government Estimate is based on an 8 hour operation. Mork shall be conducted on a 8 hr/day, 1-8 hour shift/day, 6 days/week.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offloaded from the barges on tot he Disposal Area.

#### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment
Nobilization will be from the Mouth of the Columbia River to the Confluence
of the Snake and Clearwater Rivers, approximately 461 River Miles to allow
contractors from Portland & Seattle to compete. All equipment is considered
owned - no rental equipment conduitered. All equipment other than dredging

Mcn 14 Aug 2000 Bff. Date 05/01/99 PFOJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMSOS: Dredging SOT CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 50,000 CY OF DREDGE MATERIAL

TIME 11:52:10

TITLE PAGE 1

plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:

Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/93. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Ristorical Dredging Equipment information. Mom 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMSOS: Dredging 50T CuY Confl.upland#29 - DMMS Dredging PLANNIMG ESTIMATE - 50,000 CY OF DREDGE MATERIAL \*\* PROJECT INDIRECT SUBMARY - CSI ITEM \*\*

TIME 11:52:10

SIMMARY PAGE 1

	QUANTITY UCH	TOTAL DIRECT	FOOH	ноон	PROF MS	isc Ta	BOND	TOTAL COST	UNIT COST
							Tearner Transcont		
01 SNAKE RIVER DMMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREMORK									
01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 ув	249, 305	24,931	13,712	25,195	0	4,784	317,926	317926.44
TOTAL MOB. & DEMOB. AND PREMORK	1.00 JB	249,305	24,931	13,712	25.195	0	4,784	317,926	317926.44
01.12.06.01.002 - DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.00202BB Dredging & Haul Mat to Transfer 01.12.06.01.00202EB Off Loading Barge, W/Clamshell	50000.00 CY 50000.00 CY	255,000 23,771	25,500 2,377	14,025	25,771	0	4,893	325,189 30,313	6.5
TOTAL DREDGE, MAUL & OFF-LOAD MATERIAL	50000.00 CY	278,771	27,877	15,332	28,173	0	5,349	355.502	7.1
TOTAL MECH DREDGING, RIVER TO TRANSFER	50000.00 CY	528,076	52,808	29,044	53.369	0	10,133	673,429	13.4
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AA Load, Naul, Dump & Compact D-Mat	50000.00 BCY	219,601	32,940	30,305	28,285	0	5.639	316,770	6.3
TOTAL HAUL MAT. TO DISPOSAL SITE	50000.00 CY	219,601	32,940	30,305	28,285	0	5,639	316,770	6.3
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES									
01.12.06.02.00202AA Transfer Site, Hydro Seeding 01.12.06.02.00202BA Load, Haul, Dump &Compact T-Soil	0.50 AC 333.00 BCY	1,500 1,717	225 258	207 237	193 221	0	39	2.164 2.476	4327.4
01.12.06.02.00202KA Disposal Site. Bydro Seeding 01.12.06.02.00202KB Load. Haul. Dump &Compact T-Soil	0.50 AC 333.00 BCY	1,500 1,717	225 258	207	193	0	39	2,164	4327.4
TOTAL RESTORATION-TRANSFER/DISPL SITES		6,433			721			2,476	7.4
			965	988	829		165	9,280	13850.8
TOTAL TRANSFER MATERIAL TO DISPOSAL	50000.00 CY	226,035	33,905	31,193	29,111	0	5,804	326.050	6.5

01.12.06.03 DISPOSAL/TRANSFER DEVELOMENT #29

01.12.06.03.002- RIVER SIDE DIKE & EE BARGE SLIP

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMSO5: Deedging 50T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 50,000 CY OF DREDCE MATERIAL \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

TIME 11:52:10 SUNDARY PAGE 2

	QUANTITY	UOM TOTAL DIRECT	FOOM	ноон	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
***************************************									
01.12.06.03.00202AA RS Berm, Ear	thern Fill, L.H.D.&C 5000.00	BCY 24,600	3,690	1,414	2,599	0	375	32,678	6.54
01.12.06.03.00202AB RS Barge Tie			203,233	77,906	143,152	0	20,656	1,799,831	25.71
01.12.06.03.00202DB RS Barge Tie		LF 15.096	2,264	868	1,595	0	230	20.054	52.77
01.12.06.03.00202KB RS Exc Uload		CY 46,796	7,019	2,691	4,944	0	713	62,163	1.60
01.12.06.03.00203AB Barge Tie-of		CY 113,039		6,500	11,943	0	1,723	150,161	286.02
TOTAL RIVER SIDE D	DIKE & EE BARGE SLIP 1750.00	LF 1,554,415		89,379	164,234	0	23,699	2,064,888	1179.94
01,12.06.03.004- TRANSFER SITE (EA	ST END) DIKES								
01.12.06.03.004A02A TRANS Contai	nment Bern. Dike Exc 200.00	0 CY 508	76	29	54	0	8	675	3.38
	ment Berm, Geotextile 820.00				258	0	37	3.247	3.96
01.12.06.03.004A02S TRANS Contain				39	73	0	10	912	3.38
01.12.06.0).004A027 TRANS Contai					370	0	53	4,649	4649.41
01.12.06.03.004-802A TRANS Settli				61	111	0	16	1,418	3.38
01.12.06.03.004C02A TRANS Detent				34	62	0	9	177	3.38
01.12.06.03.004D02K TRANS Fence					1,723	0	249	21,664	10.81
01.12.06.03.004D03A TRANS Overf1				359	660	0	95	0,302	4150.90
TOTAL TRANSFER SID	TE (BAST END) DIKES 5150.00	0 LF 31,345		1,803	3,312	0	478	41,644	8.09
01.12.06.03.005- ACCESS ROADS 6 HA	AUL ROAD								
01.12.06:03.00502AA Access Road.	Clear, Grub & Shape 7500.0	0 LP 26,75		1,538	2,827	0	408	35,538	4.74
TOTAL ACCESS ROADS	S & HAUL ROAD 1.0	0 EA 26,75	4,013	1,538	2,827	0	408	35,538	35538.08
01,12.06.03.006- DISPOSAL SITE DIS	KES								
01.12.06.03.006A02A DISP Contain	nment Berm, Dike Exc 6700.0	0 CY 17,03	2,555	979	1,800	0	260	22,626	3.18
01.12.06.03.006A02T DISP Contain	nment Berm, Seeding 4.0	0 ACR 14,000	2,100	805	1,479	0	211	18,598	4649.41
01.12.06.03.006B02A DISP Settlin	ng Pond, Dike 840.0	0 CY 2,13	320	123	226	- 0	33	2,837	3.38
01.12.06.03.006C02A DISP Detent:	ion Pond, Dike 460.0	0 CY 1,16			124	0	18	1,553	3.38
01.12.06.03.006D03A DISP Overflo	ow Stra between Ponda 2.0	0 EA 8,48			896	0	129	11,271	5635.37
TOTAL DISPOSAL SI	TE DIKES 7000.0		The second second second		4,524	ď	653	56,885	8.13
TOTAL DISPOSAL SI	10 01/00	0 16 42,02			41204			20,002	0.17

Mon 14 Aug 2000 Eff. Date 05/01/99 EFROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DBMS05: Dredging 50T CuY Confl.Upland#29 - DBMS Dredging
PLANNING ESTIMATE - 50,000 CY OF DREDGE MATERIAL

TIME 11:52:10

ERROR PAGE 1

No errors detected...

. . . END OF ERROR REPORT . . .

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM305: Dredging S0T CuY Confl.Upland429 - DBMS Dredging
PLANNING ESTIMATE - 50,000 CY OF DREDGE MATERIAL Mon 14 Aug 2000 Elf. Date 05/01/99 TABLE OF CONTENTS SUMMARY REPORTS SUMMARY PAGE No Detailed Estimate... No Backup Reports...

· · · END TABLE OF CONTENTS · · ·

TIME 11:52:10 CONTENTS PAGE 1

Appendix B Cost Estimates **Upland 5 Proration** 

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
32,000 cy	@ Joso									
Mechanica	Dredging, I	River to Transfer	Site (Joso)							
	Costs	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055
Disposal (J	oso) Site De	evelopment								
	Costs	\$2,198,955	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer M	aterial to Dis	sposal Site (Joso								
	Costs	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Constructio	n Subtotal	\$2,198,955	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O,M,R,R,R		\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349
-1		0				4000,010	-	4000,010		0000,010
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0.00	\$2,881,304	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0
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\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$
FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY2

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0
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\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	S
FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0
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\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	S
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY5

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349	\$
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

Appendix B
Cost Estimates

Upland 5.a.b

Mom 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DRMSO): Dreedging 32T CuY Contl.Upland429 - DMMS Dredging
PLANNING ESTIMATE - 12,000 CY OF DREDGE MATERIAL

TIME 11:53:15

TITLE PAGE 1

Dredging 32T CuY Confl Upland#29 D00KS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

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### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DROSSO: Dredging 12T CuY Confl.Upland129 - DMNS Dredging PLANNING SETHMATE - 32,000 CY OF DREDGE MATERIAL

TIME 11:53:15

TITLE PAGE 2

#### Project Description:

The Columbia and Snake Rivers, McNary Pool dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake River Nile 3 to Snake River Hile 3. All material assumed to be disposed of utilizing a Disposal Areas at the Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

#### Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the Cost Engineering Dredge Estimating Program (CEDED)

#### Overtime

Overtime is anticipated. The Government Estimate is based on a 8 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 6 days/week.

#### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

#### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

#### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

#### Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offloaded from the barges on to the Disposal Area.

#### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clemshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assured.

#### Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Ice Marbor Lock and Dam, approximately 334 River Miles to allow contractors from Portland & Seattle to compete. All equipment is condisered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:

Hom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DBMS03: Dredging 32T CuY Cosf1.Upland#29 - DBMS Dredging PLANNING ESTIMATE - 32,000 CY OF DREDGE MATERIAL

TIME 11:51:15

TITLE PAGE 3

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal ares to use. No overflow will be allowed.

Contingencies: Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for: Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mom 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT D00503: Dredging 32T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTHART - 32,000 CY OF DREDGE MATERIAL \*\* PROJECT INDIRECT SURMARY - CSI ITEM \*\*

TIME 11:53:15

SUMMARY PAGE 1

		DOWNLLAN DOW	TOTAL DIRECT	4004	HOOR	PROF Mi	sc Ta	BOND	TOTAL COST (	UNIT COS
							0.000			
01 5	SNAKE RIVER DMMS 99									
01.13	2 MAVIGATION, PORTS & MARBORS									
01.1	2.06 OREDGING RIVERS									
01.1	2.06.01 NECH DREDGING, RIVER TO TRANSFER									
01.13	2.06.01.001- NOB. & DEMOB. AND PREMORK									
01.1	2.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	164,631	16,463	9,055	16,638	0	3,548	210,335	210335.
	TOTAL MOB. & DEMOB. AND PREMORK	1.00 JB	164,631	16,463	9,055	16,638	0	3,548	210,335	210335.
01.1	2.06.01.002- DREDGE, NAUL & OFF-LOAD MATERIAL									
	2.06.01.00202BB Dredging & Haul Mat to Transfer	32000.00 CY	182,080	18,208	10,014	18,401	0	3,924	232,628	3.
.01.1	2.06.01.00202EB Off Loading Barge, W/Clarshell	32900.00 CY	21,988	2,199	1,209	2,222		474	28,092	0.
	TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	32000.00 CY	204,068	20,407	11,224	20,624	0	4,398	260,720	8.
	TOTAL MECH DREDGING, RIVER TO TRANSFER	32000,00 CY	368,699	36,870	20,278	37,262	0	7,947	471,055	14.
01.1	2.06.02 TRANSFER HATERIAL TO DISPOSAL									
01.1	2.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.1	2.06.02.00102AA Load, Haul, Dump & Compact D-Mat	32000.00 BCY	140,947	21,142	19,451	18,154	0	3,959	203,653	6.
	TOTAL HAUL MAT. TO DISPOSAL SITE	32000.00 CY	140,947	21,142	19,451	18,154	0	3,959	203,653	6.
01.1	2.06.02.002- RESTORATION-TRANSPER/DISPL SITES									
	2.06.02.00202AA Transfer Site, Nydro Seeding	0.50 AC	1,500	225	207	193	0	42	2,167	4334.
	2.06.02.00202BA Load, Haul, Dump &Compact T-Soil 2.06.02.00202KA Disposal Site, Hydro Seeding	213.00 BCY	1,144	172	158	147	.0	32	1,653	7.
	2.06.02.00202KB Load, Haul, Dump &Compact T-Soil	0.50 AC 213.00 BCY	1,500 1,144	225 172	207 158	193 147	0	42 32	2.167 1.653	4334
	TOTAL RESTORATION-TRANSPER/DISPL SITES	0.42 AC	5,288	793		401				
	TOTAL PROTECTION TRANSPORTUTION STIES	U. 12 M.	3,200	793	730	681	0	149	7,641	18192
	TOTAL TRANSFER MATERIAL TO DISPOSAL	32000.00 CY	146,236	21,935	20.181	18.835	0	4,108	211.294	6.

81.12.06.03 DISPOSAL/TRANSFER DEVELOMENT #29

01.12.06.03.001- RIVER SIDE DIKE & WE BARGE SLIP

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMSG3: Dredging 12T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 32,000 Cty DF DEEDGE MATERIAL \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:53:15 SUMMARY PAGE 2

		NOU YTITHAUD	TOTAL DIRECT	FOOR	HOOR	PROF M	lisc Ta	BOND	TOTAL COST	UNIT COST
01 12 06 03 001- 0233	RS Berm. Barthern Pill. L.H.D.&C	5000.00 BCY	24,600	3,690	1,414	2,599	0	375	32,678	6.54
	RS Barge Tie-off, Sheet Filing	70000.00 SF	1,354,884	203,233	77,906	143,152				25.71
	MS Barge Tie-off, (Wood pole)500c	380.00 LF	15,096	2,264	868	1.595	0	20,656	1,799,831	52.71
	MS Exc ULoading Area, W/Clamshell	38890.00 CY	46,796	7.019		4.944			62,163	
	Barge Tie-off, Filing Anchr-Block	525.00 CY	113.039	16,956	2,691 6,500	11,943	· o	1,723	150,161	1.60 286.0
TOTAL	RIVER SIDE DIKE & WE BARGE SLIP	1750-00 LF	1,554,415	233,162	89,379	164,234	0	23,699	2,064,888	1179.94
01.12.06.03.003+ TRAM	SFER SITE (WEST END) DIKES									
01.12.06.03.003- A02A	TRANS Containment Berm, Dike Exc	200.00 CY	508	76	29	54	0	В	675	3.3
	TRANSContainment Berm, Geotextile	820,00 SY	2,444	367	141	258	.0	37	3,247	3.9
	TRANS Containment Berm, Top Soil	270.00 CY	686	103	39	73	0	10	912	1.3
	TRANS Containment Berm, Seeding	1.00 ACR	3,500	525	201	370	0	53	4,649	4649.4
	TRANS Settling Pond, Dike	420.00 CY	1,068	160	61	113	0	16	1,418	3.3
	TRANS Detention Pond, Dike	230.00 CY	585	88	34	62	0	9	777	3.
	TRANS Fence Galv. Posts in Earth	2000.00 LY	16,308	2,446	938	1,723	0	249	21,664	10.
	TRANS Overflow Strs between Pond	2.00 EA	6,249	937	159	660	0	95	8,302	4150.5
TOTAL	TRANSFER SITE (WEST END) DIKES	5150.00 LF	31,349	4,702	1,803	3,312	0	478	41,644	8.0
01.12.06.03.005- ACCE	SS ROADS & HAUL ROAD									
01-12-06-03-00502AA	Access Road, Clear, Grub & Shape	7500.00 LF	26,751	4,013	1,538	2,827	0	408	35,538	4.7
TOTAL	ACCESS ROADS & HAUL ROAD	1.00 EA	26,753	4,013	1,538	2,827	Ó	408	35,538	35538.0
01,12,06,03,006- DISP	OSAL SITE DIKES									
01.12.06.03.006A02A	DISP Containment Berm, Dike Exc	6700.00 CY	17,033	2,555	979	1,800	0	260	22,626	3.3
	DISP Containment Bern, Seeding	4.00 ACR	14,000	2,100	805	1,479	0	213	18,598	4649.4
	DISP Settling Fond, Dike	840.00 CY	2,135	320	123	226	0	3.3	2,837	1.1
	DISP Detention Pond, Dike	460.00 CY	1.169	175	67	124	0	18	1,553	1.1
01.12.06.03.006D03A	DISP Overflow Strs between Ponds	2.00 EA	8,484	1,273	488	896	0	129	11,271	5635.3
TOTAL	DISPOSAL SITE DIKES	7000.00 LF	42,822	6,423	2,462	4,524	0	653	56,805	8.1
	DISPOSAL/TRANSPER DEVELOMENT #29	12000.00 CY	1,655,339	248,301		*******				

Mon 14 Aug 2000 Eff Date 05/01/99 ERROR REPORT Tri-Service Automated Coat Engineering System (TRACES)
PROJECT DRMSO): Dredging 32T CuY Confl.Upland#29 - DRMS Dredging
PLANNING ESTIMATE - 32,000 CY OF DREDGE MATERIAL

TIME 11:53:15

ERROR PAGE 1

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No errors detected ...

· · · END OF ERROR REPORT · · ·

Appendix B
Cost Estimates

Upland 6 Proration

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
2,000 cy	@ Joso			17		-				
Mechanica	Dredging, R	liver to Transfer	Site (Joso)							
	Costs	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346
Disposal (J	oso) Site De	velopment								STATE OF THE STATE
	Costs	n/a	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fransfer M	aterial to Dis	posal Site (Jose								
	Costs	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	60	60	60		***			
Constructio	n Cubtotal	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0	\$0	\$0
O,M,R,R,R		\$203,492	\$0	\$203,492	\$0	\$0	\$0	\$0	\$0	\$0
C,m,n,n,n	Subtotal	0	40	φ200,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492
	81	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0.00	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0
FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0
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\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0
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\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0
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\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
				lo sali una san		-					-
\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0
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\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY5

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	SI
\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492	\$
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
\$0						
\$17,429,035	\$0	\$471,055	\$0	\$471,055	\$0	\$471,055
\$2,198,955	\$0	\$0	\$0	\$0	\$0	\$0
\$7,817,878	\$0	\$211,294	\$0	\$211,294	\$0	\$211,294
\$0						
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
	40	***	¢o.	\$0	\$0	\$0
\$0	\$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0
\$2,198,955 \$25,246,913	\$0 \$0	\$682,349	\$0	\$682,349	\$0	\$682,349
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$27,445,868	\$0	\$682,349	\$0	\$682,349	\$0	\$682,349
74 Years	FY74	FY73	FY72	FY71	FY70	FY69

Appendix B
Cost Estimates

Upland 6.a

Mon 14 Aug 2000 Eff. Date 05/01/99 Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMRI2: Dredging1 27 CuY Confl.Upland#29 - DMMS Dredging
PLANMING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

TINE 11:57:46

TITLE PAGE 1

DredgingI 2T CuY Confl.Upland#29 DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Malla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Bifective Date of Pricing: 05/01/99 Bot Construction Time: 60 Days

Sales Tax: 7.90%

M CACES FOR WINDOWS Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c

LABOR ID: NAT99A BQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Mon 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMSRI2: Deedging1 2T CuY Confl.Upland#29 - DMSS Dredging PLANNING ESTIMATE - 7,000 CY OF DREDGE MATRIAL

TIME 11:57:46

TITLE PAGE 2

#### Project Description:

The Snake River, Ice Marbor Pool dredging area is located downstream of Lower Monumental Dam. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

### Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

### Overtime:

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Mork shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 5 days/week.

### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb. in any given year, due to the fish window requirements.

### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

### Site Access:

It is assumed all Disposal Transfer Sites 5 the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

### Conditions

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Monumental Lock and Dam, approximately 365 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based onthe EP 1110-1-8. All equipment other than dredging plant made and demob costs computed as 5% of direct costs.

### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be

Mom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMRI2: DredgingI 2T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

TIME 11:57:46

TITLE PAGE 3

required for determining location of disposal area to use. No overflow will be allowed.

Contingencies: Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for: Labor: General Decision Number WA990001, Medification #1 date3 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DM9RIZ: Dredging 2T Cuy Confl.Upland#29 - DMS Dredging PLANNING RETHATE - 2,000 Cry OF DREDGE MATERIAL \*\* PROJECT INDIRECT SUMMARY - CSI ITEM \*\*

TIME 11:57:46

SUMMARY PAGE 1

***********		MOD VIITHADO	TOTAL DIRECT	FOOR	HOOR	PROF Mi	sc Ta	BOND	TOTAL COST	UNIT COST
	01 SNAKE RIVER DMMS 99									
	01.12 NAVIGATION, PORTS & HARBORS									
	01.12.06 DREIGING RIVERS									
	01.12.06.01 NECH DREDGING, RIVER TO TRANSFER									
	01.12.06.01.001- MOB. & DENOB. AND FREWORK									
	01.12.06.01.00101AA Mob. & Demob. Excavation Dredges	1.00 JB	119,743	11,974	6,586	12,102	0	3,098	153,503	153502.59
	TOTAL MOB. & DEMOB. AND PREMORE	1.00 JB	119,743	11,974	6,586	12,102	0.	3,098	153,503	153502.59
	01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
	01.12.06.01.00202BE Dredging & Haul Mat to Transfer 01.12.06.01.00202EB Off Loading Barge, W/Classhell	2000.00 CY 2000.00 CY	17,700 4,800	1,770 480	974 264	1,789 485	0	458 124	22,690 6,153	11.35
	TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000.00 CY	22,500	2,250	1,237	2,274		582	28,843	14.42
	TOTAL MECH DREDGING, RIVER TO TRANSFER	2000.00 CY	142,243	14,224	7,823	14,375	0	3,680	182,346	91.17
	01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
	01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
	01.12.06.02.00102AA Load, Haul, Dump & Compact D-Mat	2000.00 BCY	10,068	1,510	1,389	1,297	0	357	14,620	7,3
	TOTAL HAUL MAT. TO DISPOSAL SITE	2000.00 CY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
	01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES									
	01.12.06.02.00202AA Transfer Site, Hydro Seeding 01.12.06.02.00202BA Load, Haul, Dump &Compact T-Soil 01.12.06.02.00202KA Disposal Site, Hydro Seeding 01.12.06.02.00202KB Load, Haul, Dump &Compact T-Soil	0.50 AC 13.00 BCY 0.50 AC 13.00 BCY	1,500 747 1,500 747	225 112 225 112	207 103 207 103	193 96 193 96	0 0	53 26 53 26	2,178 1,084 2,178 1,084	83.41 4356.66
	TOTAL RESTORATION-TRANSFER/DISPL SITES	0.05 AC	4, 493	674	620	579		159		83.41
	TOTAL TRANSFER HATERIAL TO DISPOSAL	2000.00 CY	14.561	2,184	2,009	1,875		516	21.146	10.57

Mon 14 Aug 2000 E:E. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DEMRI2: Dredging1 2T CuY Confl.Upland829 - DMMS Dredging
PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

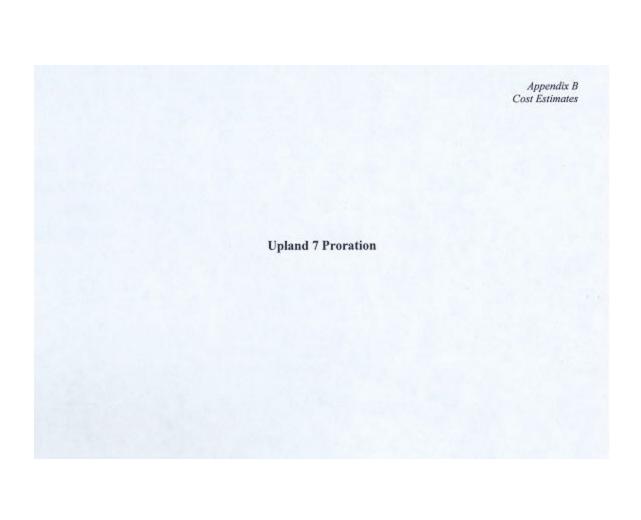
TIME 11:57:46 ERROR PAGE 1

P. Chick

No errors detected ...

. . . END OF ERROR REPORT . . .

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
\$0						
\$6,746,802	\$0	\$182,346	\$0	\$182,346	\$0	\$182,346
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$782,402	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146
\$0						
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\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$7,529,204	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$7,529,204	\$0	\$203,492	\$0	\$203,492	\$0	\$203,492
74 Years	FY74	FY73	FY72	FY71	FY70	FY69



	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
2,000 cy	@ Joso						-			
Mechanica	Dredging, R	liver to Transfer	Site (Joso)							
	Costs	\$186,480	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480
Disposal (J	oso) Site De	velopment								
	Costs	n/a	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer M	aterial to Dis	posal Site (Jose	)							
	Costs	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146
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		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S0
Constructio	n Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Totals	\$0.00	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
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FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

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FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3.

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
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FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

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\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY5

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
				****	***	****	to.	A400.400		\$400.400	
\$186,480	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$
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\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	\$
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

Appendix B
Cost Estimates

Upland 7.a

Mon 14 Aug 2000 Eff. Date 05/01/99

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMSRM1: Dredgingh 2T CuY Confl.Upland129 - DMS Dredging
PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

TIME 12:00:00

TITLE PAGE 1

DredgingN 2T CuY Confl.Upland#29 DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

Sales Tax: 7.90%

M C A C E S F O R W I N D O W S Software Copyright (c) 1985-1998 by Building Systems Design, Inc. Release 1.2c

LABOR ID: NAT99A EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

TITLE PAGE 2

......

Project Description:

The Snake River, Lower Monumental Pool dredging area is located downstream of Little Goose Dan and near the confluence of the Palouse and Snake River confluence. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 36. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:

Planning level estimate produced utilizing the NICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime.

Overtime is anticipated. The Covernment Estimate is based on a 24 hour operation. Work shall be conducted on an 8 hr/day, 1-8 hour shift/day, 5 days/week.

Construction Windows:

Oredging operations will begin on 15 December, and shall not continue after 28 Peb, in any given year, due to the fish window requirements.

Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment
Mobilization will be from the Mouth of the Columbia River to Little Goose
Lock and Dam, approximately 194 River Hiles to allow contractors from
Portland & Seattle to compete. All equipment is considered owned - no rental
equipment considered. All equipment other than dredging plant rates were
computed based on the EP 1110-1-8. All equipment other than dredging plant
mob and demob costs computed as 5% of direct costs.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve

Mor 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DEMRM2: DredgingM 2T CuY Contl.Upland#29 - DEMS Dredging
PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

TIME 12:00:00

TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies: Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for: Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information. Mon 14 Aug 2000 Eff. Date 05/01/99

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DROGAZ: DredgingM 2T CuY Confl Upland#29 - ERMS Dredging PLANNING ESTIMATE - 2.000 CY OF DREDGE MATERIAL \*\* PROJECT INDIRECT SUMMARY - CSI 1TEM \*\*

TIME 12:00:00

SUNDIARY PAGE 1

 	MOD YTTTMAUD	TOTAL DIRECT	FOOR	HOOR	PROF Mi	sc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DOMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 NECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.00101AA Hob. & Demob. Excavation Dredges	1.00 JB	127,546	12,755	7,015	12,890	0	3,280		163485.53
TOTAL MOB. 4 DEMOB. AND PREMORK	1.00 JB	127,546	12,755	7,015	12,890	0	3.280	163,486	163485.53
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD HATERIAL									
01,12.06.01.00202BB Dredging & Haul Mat to Transfer 01.12.06.01.00202EB Off Loading Barge, W/Clamchell	2000.00 CY 2000.00 CY	13,140 4,800	1,314 480	723 264	1,328 485	0	)38 123	16,843 6,152	8.42
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000.00 CY	17,940	1,794	987	1,813	0	461	22,994	11.50
TOTAL MECH DREDGING, RIVER TO TRANSFER	2000.00 CY	145,486	14,549	8,002	14,703	0	3,741	186,480	93.24
01.12.06.02 TRANSFER MATERIAL 'D DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AA Load, Haul, Dump & Compact D-Mat	2000.00 BCY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
TOTAL HAUL MAT. TO DISPOSAL SITE	2000.00 CY	10,068	1.510	1,389	1,297	0	357	14,620	7.31
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES									
01.12.06.02.002_02AA Transfer Site, Hydro Seeding 01.12.06.02.002_02BA Load, Haul, Dump &Compact T-Soil 01.12.06.02.002_02KA Disposal Site, Hydro Seeding 01.12.06.02.002_02KB Load, Haul, Dump &Compact T-Soil	0.50 AC 13.00 BCY 0.50 AC 13.00 BCY	1,500 747 1,500 747	225 112 225 112	207 103 207 103	193 96 193 96	0 0 0	53 26 53 26	2,178 1,084 2,178 1,084	83.4 4356.6
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.05 AC	4,493	674	620	579	0	159	*********	
TOTAL TRANSFER MATERIAL TO DISPOSAL	2000.00 CY	14,561	2,184	2,009	1,875		516	21,146	

Mon 14 Aug 2000 Eff. Date 05/01/99 ERROR REPORT Tri-Service Automated Cost Engineering System ITRACES)
PROJECT DOGRAZ: DredgingM 2T CuY Confl.Upland#29 - DMMS Dredging
PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

TIME 12:00:00

ERROR PAGE 1

No errors detected ...

\* \* \* END OF ERROR REPORT \* \* \*

Mon 14 Aug 2000 Eff. Date 05/01/99 TABLE OF CONTENTS

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DRMRM2: DredgingM 2T Cut Coofl.Upland#29 - DRMS Dredging PLANMING ESTIMATE - 2,006 CY OF DREDGE MATERIAL

CONTENTS PAGE 1

TIME 12:00:00

SUMMARY REPORTS SUMMARY PAGE

No Detailed Estimate...

No Backup Reports...

\* \* \* END TABLE OF CONTENTS \* \* \*

Appendix B Cost Estimates **Upland 8 Proration** 

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
4,000 cy	@ Joso									
Mechanical	Dredging, Riv	er to Transfer Site	(Joso)							
	Costs	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318
Disposal (J	oso) Site Deve	lopment							4.2	-
	Costs	n/a	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fransfer Ma	aterial to Dispo	osal Site (Joso)					200	0.000000	20	
	Costs	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Constructio	n Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O.M,R,R,R	Subtotal	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084
		0								
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0.00	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,08
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
\$	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0
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4	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0
FY2	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
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\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0
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\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	S
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FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
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FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
			===								
\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	S
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY5

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084	\$
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69	
\$0							
\$6,899,760	\$0	\$186,480	\$0	\$186,480	\$0	\$186,480	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$782,402	\$0	\$21,146	\$0	\$21,146	\$0	\$21,146	
\$0							
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$7,682,162	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$7,682,162	\$0	\$207,626	\$0	\$207,626	\$0	\$207,626	
74 Years	FY74	FY73	FY72	FY71	FY70	FY69	

Appendix B Cost Estimates Upland 8.a

Mom 14 Aug 2000 Eff. Date 05/01/99

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMRG4: DredgingG 4T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 4,000 CY OF DREDGE MATERIAL

TIME 12:00:58 TITLE PAGE 1

Designed By: Walla Walla District COE Estimated By: R. Hynek and J. Davin

DredgingG 4T CuY Confl.Upland#29 DMMS Dredging of Snake & Clearwater Rivers with Upland Disposal

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 05/28/99 Effective Date of Pricing: 05/01/99 Est Construction Time: 60 Days

> Sales Tax: 7.90%

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LABOR ID: NAT99A EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Mom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

### Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEBRG4: Dredgings 4T CuY Confl.Upland129 - DMNS Dredging PLANNING ESTIMATE - 4,000 CY OF DREGGE MATERIAL

TIME 12:00:58

TITLE PAGE 2

### Project Description:

The Snake River, Little Goose Pool dredging area is located downstream of Lower Granite Dam and at Schultz Bar located near Snake River Mile 100. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

### Basis of Design:

Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the Cost Engineering Dredge Estimating Program (CEDER)

#### Overtime

Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shift/day. 5 days/week.

### Construction Windows:

Dredging operations will begin on 15 December, and shall not continue after 28 Feb. in any given year, due to the fish window requirements.

### Sub Contracting Plan:

No Sub Contracting considered all work to be performed by Prime Contractor.

### Site Access:

It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

### Construction Methodology:

Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

### Conditions:

This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

### Equipment/Labor Availability & Distance Traveled:

Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Granite Lock and Dam, approximately 411 River Hiles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

### Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve

Mom 14 Aug 2000 Eff. Date 05/01/99 PROJECT NOTES

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMSRG4: DredgingG 4T CuY Confl.Upland#29 - DMMS Dredging
PLANNING ESTIMATE - 4.000 CY OF DREDGE MATERIAL

TIME 12:00:58

TITLE PAGE 3

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies: Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for: Labor: General Decision Number WA990001, Modification #1 dated 3/1/99. Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

Mon 14 Aug 2000 Eff. Date 05/01/99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DEMRG4: DredgingG 4T CuY Confl.Upland#29 - DMMS Dredging PLANNING ESTIMATE - 4,000 CY OF DREDGE MATERIAL \*\*\* PROJECT INDIRECT SURMARY - CS1 ITEM \*\*

TIME 12:00:58 SUMMARY PAGE 1

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	QUANTITY UOH	TOTAL DIRECT	FOOH	HOOR	PROP Mi	sc Ta	DOND	TOTAL COST	UNIT COST
		***********						***********	
01 SNAKE RIVER DMMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.00101AA Hob. & Demob. Excavation Drec	dges 1.00 JB	133, 311	13,331	7,332	13,473	9	1,135	170,782	170782.42
TOTAL MOB. & DEMOS. AND PREMORE	1.00 JB	133,311	13,331	7,332	13,473	0	3,135	170,782	170782.42
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.002028B Dredging & Haul Mat to Trans 01.12.06.01.002028b Off Loading Harge, W/Clamshe		23,720 4,800	2,372 480	1,305 264	2,397 485	0	593 120	30,387 6,149	
TOTAL DREDGE, HAUL & OFF-LOAD MATER	RIAL 4000.00 CV	28,520	2,852	1,569	2,882	0	714	36,536	
TOTAL MECH DREDGING, RIVER TO TRANS	SPER 4000.00 CY	161,831	16,183	8,901	16,355	C	4,049	207,318	51.83
01.12.06.02 TRANSFER NATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.00102AA Load, Haul, Dump & Compact D	-Mat 4000.00 BCY	20,135	3,020	2,779	2,593	0	713	29,241	7.31
TOTAL HAUL MAT. TO DISPOSAL SITE	4000.00 CY	20,135	3,020	2,779	2,593	0	713	29,241	
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES									
01.12.06.02.00202AA Transfer Site, Hydro Seeding 01.12.06.02.00202BA Load, Haul, Dump &Compact T- 01.12.06.02.00202RA Disposal Site, Hydro Seeding 01.12.06.02.00202RB Load, Haul, Dump &Compact T-	Soil 27.00 BCY 0.50 AC	1,500 747 1,500 747	225 112 225 112	207 103 207 103	193 96 193 96	0 0 0	53 26 53 26	2,178 1,084 2,178 1,084	40.16 4356.66
TOTAL RESTORATION-TRANSFER/DISPL S	ITES 0.06 AC	4,493	674	620	579	0	159		108754.63
TOTAL TRANSFER MATERIAL TO DISPOSA	L 4000.00 CY	24,629	3,694	3,199	3,172	0	872	35,766	

Mcn 14 Aug 2000 Eff. Date 05/01/99 EFROR REPORT

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMRG4: DwedgingS 4T CuY Confl.Upland#29 - DMMS Dwedging
PLANMING ESTIMATE - 4,000 CY OF DWEDGE MATERIAL

TIME 12:00:58

ERROR PAGE 1

No errors detected ...

. . END OF ERROR REPORT . . .

LABOR ID: NAT99A BQUIP ID: NAT97C

Currency in DOLLARS

CREM ID: NAT99A UPB ID: UP99EA

Mon 14 Aug 2005 ETC. Date 05/01/39 TABLE OF CONTENTS

## Tri-Service Automated Cost Engineering System (TDACES) FROMET DESPECT: DredgingS 4T CuY Confl Upland#12 - DRMS Dredging PLANNING ESTIMATE - 4,000 CY CF DREDGE MATERIAL

CONTENTS PAGE 1

TIME 12:00:50

......

No Detailed Estimate...

No Sackup Reports ...

. . . END TABLE OF CONTENTS . . .

Appendix B
Cost Estimates

Upland 9 Proration

	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
7,000 cy	@ Joso									
Mechanica	I Dredging, Riv	ver to Transfer	Site (Joso)							
	Costs	\$0	\$0	\$0	\$0	\$115,500	\$0	\$0	\$0	\$0
Disposal (J	loso) Site Deve	elopment								
190	Costs	\$0	\$0	\$0	\$0	\$11,382,888	\$0	\$0	\$0	\$0
Transfer M	aterial to Disp	osal Site (Jose	)							
	Costs	\$0	\$0	\$0	\$0	\$113,750	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Constructio	n Subtotal	\$0	\$0	\$0	\$0	\$11,382,888	\$0	\$0	\$0	\$0
O,M,R,R,R		\$0	\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	\$0
O,111,111,111,111	Oubtotui	0	40	40	ΨΟ	Q220,200	90	40	40	ΨΟ
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0.00	\$0	\$0	\$0	\$0	\$11,612,138	\$0	\$0	\$0	\$0
	Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY2	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10
9 - 17										
\$115,50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$115,500
S	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$113,75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$113,750
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$229,25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250
\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$229,25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250
FY2	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$115,500	\$0	S
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$113,750	\$0	s
\$0											
\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0	s
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$
FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY3

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$115,500	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$113,750	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$(
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	S
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	S
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY4

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
										ATT 9	
\$0	\$0	\$0	\$0	\$0	\$115,500	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$(
\$0	\$0	\$0	\$0	\$0	\$113,750	\$0	\$0	\$0	\$0	\$0	\$(
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	s
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	\$0	\$0	\$
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY50

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
\$0	\$0	\$0	\$115,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
\$0	\$0	\$0	\$113,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Si
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
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\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
\$0	\$0	\$0	\$229,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY6

	Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
What the number should be -\$924,000.00 What the number should be	\$924,000	\$0  \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115,500 \$0	\$0 \$0
-\$910,000.00	\$910,000	\$0	\$0	\$0	\$0	\$113,750	\$0
\$0.00	\$0						
\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$13,216,888.00							
	\$0 \$11,382,888	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
	\$1,834,000	\$0	\$0	\$0	\$0	\$229,250	\$0
\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0.00	\$13,216,888	\$0	\$0	\$0	\$0	\$229,250	\$0
	74 Years	FY74	FY73	FY72	FY71	FY70	FY69

Subtotal 74 Years	FY74	FY73	FY72	FY71	FY70	FY69
\$0						
\$7,670,766	\$0	\$207,318	\$0	\$207,318	\$0	\$207,318
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,323,342	\$0	\$35,766	\$0	\$35,766	\$0	\$35,766
\$0						
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0
	***	¢0	\$0	\$0	\$0	\$0
\$0	\$0	\$0 \$0	\$0	\$0	\$0	\$0
\$8,994,108	\$0 \$0	\$243,084	\$0	\$243,084	\$0	\$243,084
\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$8,994,108	\$0	\$243,084	\$0	\$243,084	\$0	\$243,084
74 Years	FY74	FY73	FY72	FY71	FY70	FY69



Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMP01: Dredged Material Management Plan - DMMP Joso Contingency Upland
BUDGET ESTIMATE JOSO CONTINGENCY DISPOSAL SITE

TIME 14:57:14 TITLE PAGE 1

Dredged Material Management Plan DNMP Joso Contingency Upland Disposal Site

Designed By: Walla Walla District COE Estimated By: Tafedeo Sana

Prepared By: Cost Engineering Branch Kim Callan, Chief

Preparation Date: 06/11/01 Effective Date of Pricing: 06/11/01 Est Construction Time: 180 Days

Sales Tax: 7.90%

M C A C E S for Windows Software Copyright (c) 1985-1997 by Building Systems Design, Inc. Release 1.2

LABOR ID: EMWA99 EQUIP ID: NAT99A

Currency in DOLLARS

CREW ID: USNBEN UPB ID: UP99EA

Wed 03 Oct 2001 Eff. Date 06/11/01 PROJECT WOTES Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMPOIS Dredged Material Management Plan - DMMP Joso Contingency Upland
BUGGET ESTIMATE JOSO CONTINGENCY DISPOSAL SITE

TIME 14:57:14 TITLE PAGE 2

Project Description: The JOSO Dredge Material Disposal Site is located along the southern shore of the Snake River between River Miles 56.5 and 56.8. The Disposal site will consist of two types of material disposal, about 25% of the pit will be lined for contaminated material storage. A barge slip and unloading area will be constructed at the West end of the Joso Site. Landings will be formed on either side of the slip for crane access. Two temporary dredged material storage areas will be developed adjacent to the slip for dewatering. One temporary storage area mill be completely lined. A haul road will be developed to transport material from the unloading area/temporary storage to the permanent disposal area.

Basis of Design: Estimate based on preliminary drawings provided by soils/civil branch. Excavation and fill quantities provided by soils/civil branch. Estimate for Sheet Pile and in-water Mooring dolphins based on Port of Benton Modifications Estimate, Revision #4.

Overtime: Overtime is anticipated. The Government Estimate is based on a 8 hour operation. Mork shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 6 days/week.

Construction Windows: Most work will be accomplished in dry conditions between July 2002 and November 2002. Remaining work will be in-water and restricted to beginning 1 November 2002 extending through 15 December 2002.

Sub Contracting Plan: The following subcontractors included in the estimate: PD - Pile Driving Subcontractor LS - Landscaping Subcontractor

Site Access: The Joso Disposal Site is Located along the Southern Shore of the Snake River between River Miles 56.5 and 56.8. It is assumed the Site is accessible without further deedging requirements.

Construction Methodology: The construction methodology is standard marine and civil contruction.

Conditions: This work will take place during Summer through Winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Equipment and Labor is available within a 100-mile radius which includes the cities of Richland, Pasco, Kennewick, Washington. Marine floating plant for dolphin construction is available from the Portland, Oregon and Vancouver, Washington area, approximately 275 miles distance.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Wed C3 Oct 2001 Eff. Date 06/11/01 PROJECT NOTES

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMP01: Dredged Material Management Plan - DMMP Joso Contingency Upland
BUDGET ESTIMATE JOSO CONTINGENCY DISPOSAL SITE

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TITLE PAGE 3

Contingencies: No Contingency

Profit: 9.26% profit developed using the weighted guidelines method.

Effective dates for:

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: NAT99A - EP 1110 - region 8, Jun99
99 Labor and Equipment Rates used as Requested by Project Manager Jack Sands
to correspond with other estimates developed for DMMP/EIS.
crews: USNBEN - Nat'l crews database-A - eff. Jan96
UPB: UP99EA Nat'l UPB eff. Jan99

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMPD1: Dredged Material Management Plan - DMMP Joso Contingency Upland BUDGET ESTIMATE JOSO CONTINGENCY DISPOSAL SITE \*\* PROJECT INDIRECT SUMMARY - BID ITEM \*\*

TIME 14:57:14

SUMMARY PAGE 1

		QUANTITY UOM	TOTAL DIRECT	FOOH	ноон	PROF P	tisc Ta	BOND	TOTAL COST	UNIT COST
AA SNAKE RIVER DM	MP									
AA.12 NAVIGATION	PORTS AND HARBORS									
AA.12.01 UPLAND D	ISPOSAL SITE									
OROL 10.10.ST.AA	SITE DEVELOPEMENT									
	MOBILIZATION AND DEMOBILIZATION BARGE SLIP EXCAV & GRAVEL FILL CHANNEL DREDGING	1.00 EA 1.00 JOB 9000.00 CY	148,806 128,532 74,919	14,881 12,853 7,492	8,184 7,069 4,121	15,915 13,747 8,013	0 0	1,533 1,352 788		189319.22 163553.23 10.59
AA.12.01.01.003C AA.12.01.01.004A	IN-WATER STRUCTURES (DOLPHINS) UNLOADING AREA EXCAVATION & FILL	2.00 EA 1.00 JOB	115,072 2,863,429	11,507 286,343	6,329 157,489	12,307 306,252	0	1,133 30,122	146,348 3,643,635	73174.19 3643635
	GEOMEMBRANE LINER AND FILL	1.00 JOB 124560.00 SY	645,917 2,756,098	64,592 275,610	35,525 151,585	69,083 294,773	0	6,795 28,993	3,507,059	
AA.12.01.01.007A	WHARF STRUCTURAL COMPONENTS HAUL ROAD MISCELLANEOUS SITE WORK	1.00 EA 6480.00 LF 1.00 JOB	1,811,116 336,245 65,962	181,112 33,625 6,596	99,611 18,493 3,628	193,704 35,962 7,055	0	17,833 3,537 1,249	2,303,377 427,863 84,489	2303377 66.03 84488.99
	JOSO SITE DEVELOPEMENT	1.00 EA	8,946,096			956,812	0	93,335	11,382,888	

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMP01: Dredged Material Management Plan - DMMP Joso Contingency Upland BUDGET ESTIMATE JOSO CONTINGENCY DISPOSAL SITE \*\* PROJECT DIRECT SUMMARY - BID ITEM \*\*

TIME 14:57:14

SUMMARY PAGE 2

		QUANTITY UON	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
***************************************			******			**********			
AA SNAKE RIVER DE	MMP								
AA.12 NAVIGATION	PORTS AND HARBORS								
AA.12.01 UPLAND I	DISPOSAL SITE								
AA.12.01.01 JOSO	SITE DEVELOPEMENT								
AA, 12,01,01,003A AA, 12,01,01,003B AA, 12,01,01,003C AA, 12,01,01,004A AA, 12,01,01,004C AA, 12,01,01,004C AA, 12,01,01,007A AA, 12,01,01,007A	MOBILIZATION AND DEMOBILIZATION BARGE SLIP EXCAV & GRAVEL FILL CHANNEL DREGGING IN-WATER STRUCTURES (DOLPHINS) UNLOADING AREA EXCAVATION & FILL CONTAINMENT BERNS GEOMEMBRANE LINER AND FILL WHARF STRUCTURAL COMPONENTS HAUL ROAD MISCELLANEOUS SITE MORK	1.00 EA 1.00 JOB 9000.00 CY 2.00 EA 1.00 JOB 1.00 JOB 124560.00 SY 1.00 EA 6480.00 LF 1.00 JOB	1,454 2,057 432 569 10,149 12,665 24,375 8,509 3,782 400	54,611 63,429 30,631 21,835 1,342,889 397,962 785,975 306,175 168,386 12,584	247,955 464,845	10,668 0 50,695 17,609 0 1,505,278 1,402,201 0 47,433	0 0 0 0 0 0 0	128,532 74,919 115,072 2,863,429	
TOTAL	JOSO SITE DEVELOPEMENT	1.00 EA	64,393	3,184,477	2,727,735	3,033,884	0	8,946,096	8946096
FIEL	D OFFICE OVERHEAD	10.00 %						894,610	
	BTOTAL DFF1CE OVERHEAD	5.00 %						9,840,705 492,035	
SUI PROF	BTOTAL IT	9.26 %						10,332,740 956,812	
SUI BOND	BTOTAL	0.83 X						11,289,552 93,335	
10	TAL INCL INDIRECTS							11,382,888	

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DWMPRV: DMMP JOSO DISP. SITE VE STUDY - DMMP Joso Contingency Upland
BUGGET ESTIMATE JOSO DISPOSAL REV.

TIME 15:49:48

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DMMP JOSO DISP. SITE VE STUDY DMMP Joso Contingency Upland Disposal Site

Designed By: Walla Walla District COE Estimated By: Robert Hynek

Prepared By: Cost Engineering Branch

Kim Callan, Chief

Preparation Date: 08/10/01 Effective Date of Pricing: 06/11/01 Est Construction Time: 180 Days

Sales Yax: 7.90%

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LABOR ID: EWWA99 EQUIP ID: NAT99A

Currency in DOLLARS

CREW ID: USNBEN UPB ID: UP99EA

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMPRV: DMMP JOSO DISP. SITE VE STUDY - DMMP Joso Contingency Upland BUDGET ESTIMATE JOSO DISPOSAL REV. \*\* PROJECT OWNER SUMMARY - BID ITEM \*\*

TIME 15:49:48

SUMMARY PAGE 1

QUANTITY UOM CONTRACT COST CONTINGN ESCALATH E & D S & A TOTAL COST UNIT COST

AA SNAKE RIVER DMMP

AA.12 NAVIGATION PORTS AND HARBORS

AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING

AA.12.02.02 1st YEAR DREDGING COST

AA.12.02.02. 1 DREDGING COST 7000.00 CY 115,500 0 0 0 115,500 16.50

TOTAL 1st YEAR DREDGING COST 1.00 CY 115,500 0 0 0 0 115,500 115500.00

# Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMPRV: DMMP JOSO DISP. SITE VE STUDY - DMMP JOSO Contingency Upland BUDGET ESTIMATE JOSO DISPOSAL REV. \*\* PROJECT INDIRECT SUMMARY - BID ITEM \*\*

TIME 15:49:48 SUMMARY PAGE 2

POLITY TON	TOTAL	DIRECT	FOOH	HOOH	PROF Misc Ta	BOND	TOTAL COST UNIT COST

AA SNAKE RIVER DMMP

AA.12 NAVIGATION PORTS AND HARBORS

AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING

AA.12.02.02 1st YEAR DREDGING COST

AA.12.02.02. 1 DREDGING COST	7000.00 CY	115,500	0	0	0	0	. 0	115,500	16.50
			*******	********	*******	******	*******	*********	
TOTAL 1st YEAR DREDGING COST	1.00 CY	115,500	0	0	0	0	0	115,500	115500.00

## Tri-Service Automated Cost Engineering System (TRACES) PROJECT DMMPRV: DMMP JOSO DISP, SITE VE STUDY - DMMP Joso Contingency Upland BUDGET ESTIMATE JOSO DISPOSAL REV. \*\* PROJECT DIRECT SUMMARY - BID ITEM \*\*

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SUMMARY PAGE 3

QUANTITY UOM MHRS LAB EQUIP MAT OTHER TOTAL COST UNIT COST

AA SNAKE RIVER DMMP

AA.12 NAVIGATION PORTS AND HARBORS

AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING

AA.12.02.02 1st YEAR DREDGING COST

AA.12.02.02. 1 DREDGING COST 7000.00 CY 0 0 0 115,500 115,500 16.50

TOTAL 1st YEAR DREDGING COST 1.00 CY 0 0 0 0 115,500 115,500 115500.00